

JVC

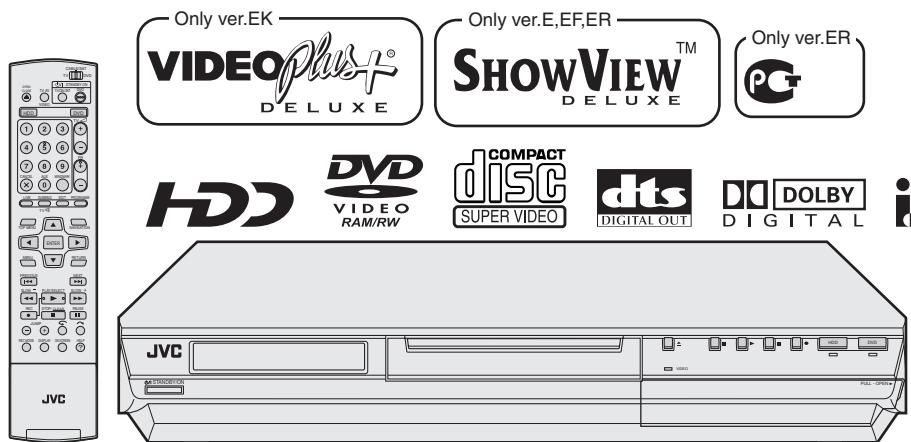
SERVICE MANUAL

DVD&HDD VIDEO RECORDER

**DR-MH20SE, DR-MH20SEK, DR-MH20SEF
DR-MH30SE, DR-MH30SEK
DR-MH30SEF, DR-MH30SER**

Area Suffix

EK ----- U.K.
EF ----- France
ER ---- Russian Federation
E ----- Continental Europe
Northern Europe



DR-MH20SE, DR-MH20SEK, DR-MH20SEF [D4HR20]
DR-MH30SE, DR-MH30SEK, DR-MH30SEF, DR-MH30SER [D4HR25]

Since the whole mechanism assembly unit is replaced, the DVD recorder mechanism of this unit need not be adjusted.

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SPECIFICATION

	DR-MH20SE,DR-MH30SE,DR-MH30SER	DR-MH20SEK,DR-MH30SEK	DR-MH20SEF,DR-MH30SEF
GENERAL			
Power requirement	AC 220 V - 240 V~, 50 Hz/60 Hz		
Power consumption	Power on : 37 W Power off : 19.3 W		
Temperature	Operating : 5°C to 40°C Storage : -20°C to 60°C		
Operating position	Horizontal only		
Dimensions (W x H x D)	435 mm x 70 mm x 345.5 mm		
Weight	6.1 kg		
Input/Output			
S-video input	Y:0.8-1.2 Vp-p, 75 ohms C : 0.2 -0.4 Vp-p, 75 ohms		
S-video output	Y : 1.0 Vp-p, 75 ohms C : 0.3 Vp-p, 75 ohms		
Video input	0.5- 2.0 Vp-p, 75 ohms (pin jack)		
Audio input	-8 dB, 50 kilohms (pin jack) Corresponding to mono (left)		
Audio output	-8 dB, 1 kilohms (pin jack)		
i.Link	4-pin for DV input		
Component video output	Y : 1.0 Vp-p, 75 ohms CB/CR, PB/PR: 0.7 Vp-p, 75 ohms Corresponding to copy protection		
Digital audio output	Optical: -18 dBm, 660 nm Coaxial: 0.7 Vp-p, 75 ohms Corresponding to Dolby Digital and DTS Digital Surround Bit stream Selectable in digital audio output setting menu		
RCA connectors	IN x 1, OUT x 1		
VIDEO/AUDIO (DVD Deck)			
Recording time	Maximum 8 hours (with 4.7 GB disc) (XP) : Approx. 1 hour, (SP) : Approx. 2 hours, (LP) : Approx. 4 hours, (EP) : Approx. 6 hours, (FR) : Approx. 1 hour - 8 hours		
Audio recording system	Dolby Digital (2 ch) Linear PCM (XP mode only)		
Video recording compression system	MPEG2 (CBR/VBR)		
VIDEO/AUDIO (HDD Deck)			
Video recording compression system	MPEG2 (VBR)		
Audio recording system	Dolby Digital (2 ch) Linear PCM (XP mode only)		
Recording time	Maximum 204 hours (XP): Approx. 34 hours,(SP): Approx. 68 hours,(LP): Approx. 136 hours,(EP): Approx. 204 hours,(FR480): Approx. 272 hours		
TUNER/TIMER			
Signal system	PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields	-	
TV channel storage capacity	99 positions (+AUX position)		
Tuning system	Frequency synthesized tuner		
Channel coverage (SECAM-L)	-	VHF(LOW):49 MHz-65 MHz(2-4) VHF(HIGH):104 MHz-300 MHz(5-10CATV) Hyper:300 MHz-470 MHz(CATV) UHF:470 MHz-862 MHz(21-69)	
Channel coverage(PAL)	VHF(LOW): 47 MHz-89 MHz VHF(HIGH):104 MHz -300 MHz Hyper:302 MHz-470 MHz UHF 470 MHz-862 MHz	VHF(LOW):44.5 MHz-143 MHz VHF(HIGH):143 MHz-470 MHz UHF: 470 MHz-862 MHz	VHF(LOW):47 MHz-89 MHz (E2-E4,X,Y,Z) VHF(HIGH):104 MHz-300 MHz (E5-E12,S1-S20,M1-M10,U1-U10) Hyper:302 MHz-470 MHz(S21-S41) UHF:470 MHz-862 MHz(E21-E69)
Memory backup time	Approx. 60 seconds		
ACCESSORIES			
Provided accessories	RF cable,21-pin SCART cable,Satellite Controller,Infrared remote control unit,"R6" battery x 2	RF cable,21-pin SCART cable,Satellite Controller,Infrared remote control unit,"AA" battery x 2	RF cable,21-pin SCART cable,Satellite Controller,Infrared remote control unit,"R6" battery x 2

E.& O.E. Design and specifications subject to change without notice.

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SECTION 1

PRECAUTION

1.1 Safety Precautions

- (1) This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (Δ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
- (4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
- (5) Leakage shock hazard testing

After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).

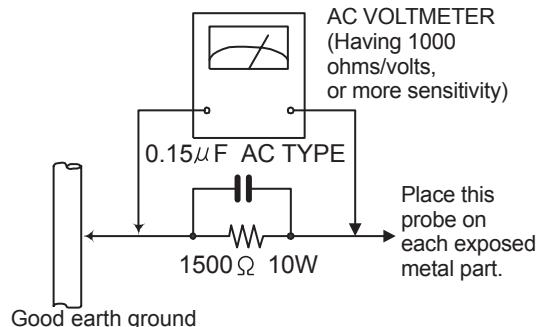
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000Ω per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC

voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



1.2 Warning

- (1) This equipment has been designed and manufactured to meet international safety standards.
- (2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
- (3) Repairs must be made in accordance with the relevant safety standards.
- (4) It is essential that safety critical components are replaced by approved parts.
- (5) If mains voltage selector is provided, check setting for local voltage.

1.3 Caution

Burrs formed during molding may be left over on some parts of the chassis.

Therefore, pay attention to such burrs in the case of performing repair of this system.

1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (—), diode (■) and ICP (●) or identified by the "Δ" mark nearby are critical for safety. When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (This regulation dose not Except the J and C version)

1.5 Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The CD,MD and DVD player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified here in may result in hazardous radiation exposure.



CAUTION Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated.

AVOID DIRECT EXPOSURE TO BEAM.

ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling.

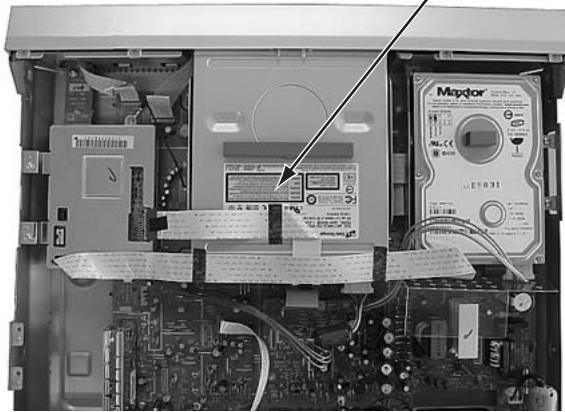
WARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alittiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi.

REPRODUCTION AND POSITION OF LABEL and PRINT

WARNING LABEL and PRINT

On mechaism assembly



CAUTION VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSAETTELSE FOR STRÅLING SE IKKE IND I STRÅLEN - HELLER IKKE MED OPTISKE INSTRUMENTER.
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNDGÅ EKSPOSERING FOR STRÅLEN STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER.
VARO! AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTTÖMÄÄ LASERSÄTEILYLLÄ.
VARO! ÄLÄ TUIJOTA SÄTEESENÄ ÄLÄKÄ KATSO SITÄ OPTISEN LAITTEEN LÄPI.
VARNING SYNLIG OCH OSYNLIG LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN MED OPTISKA INSTRUMENT.

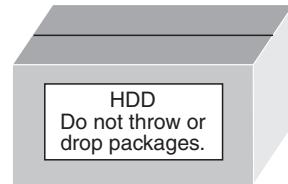
1.6 Hard Disk Drive (HDD) Handling Precautions

The HDD is a precision device for use in reading and writing a large amount of data on or from a disk rotating at a high speed. If it is not handled carefully, either abnormal operation may result or it may not be possible to read data. The HDD is sensitive to the following items and special care is required in safeguarding against them when handling an HDD. Also take care in handling a set incorporating an HDD.

- (1) Vibrations and impacts
- (2) Static electricity
- (3) Rough handling

1.6.1 Handling in transport, etc.

- Be sure to place the HDD in the manufacturer's specified package carton before transport.
- When receiving a package containing an HDD, check that the package carton is not damaged (such as having holes in the carton, crushed corners, etc.).
- Do not impact the packaging carton when loading or unloading it.
- It is not permitted to use the inner package carton only for transporting an HDD.
- Do not stack package cartons one upon another.



Be sure to package and transport the HDDs correctly.

1.6.2 Handling an HDD in the stand-alone status

- When handling an HDD on a hard workbench, place an anti-static mat (rubber sheet) or similar object on the hard surface (to prevent any impacts occurring between the HDD and bench).
- Do not stack the HDDs one upon another.
- Do not knock an HDD with a hard object (such as a screwdriver).
- Do not place an HDD on its side panel without using a support (do not place an HDD in an unstable position).



1.6.3 Handling the installation of an HDD

- Place antistatic mats or similar sheets on all of the surfaces on which work is conducted or when the HDD is transported.
- Do not permit the HDD to knock against the set's brackets.
- When screwing the brackets, be careful not to knock the HDD. When using a power screwdriver, use a low-shock model and arrange the tightening torque properly.
- When mounting an HDD in a main body, take care not to apply excessive force to the brackets.

SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3 DISASSEMBLY

3.1 Main body section

3.1.1 Remove the top cover (See figure 1)

- (1) Remove the four screws **A** attaching the top cover on both sides of the main body.
- (2) Remove the five screws **B** attaching the top cover on the back of the main body.
- (3) Raise the both sides and lower part of the rear of the top cover, with opening them slightly in an outward direction. And the top cover will be removed.

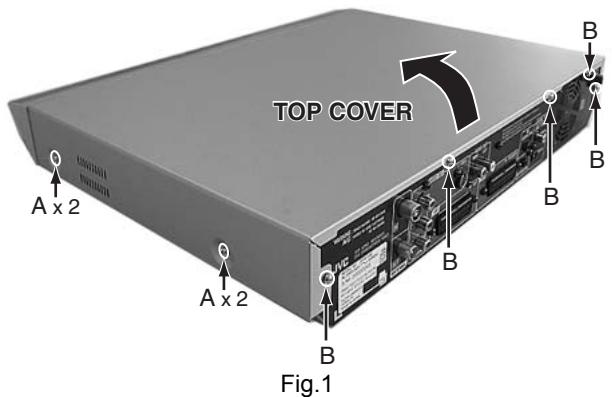


Fig.1

3.1.2 Remove the front panel assembly and HDD (See figure 2, figure 3, figure 4, and figure 5)

- Prior to performing the following procedure, remove the top cover.
- There is no need to remove the drive unit.
- (1) Remove the four screws **C** attaching the HDD.
- (2) Disconnect the socket wire from connector [CN5307](#) on the switching regulator board.
- (3) Disconnect the card wire from connector on the HDD.
- (4) Disconnect the card wires from connector [CN3001](#), [CN3002](#), [CN4001](#) on the main board.
- (5) Hooks **a** and **b** are removed respectively, and the front panel assembly is removed.

NOTE:

In case of attach a front panel assembly, please let a card wire pass in the hole in the front part of a chassis, respectively, and connect.

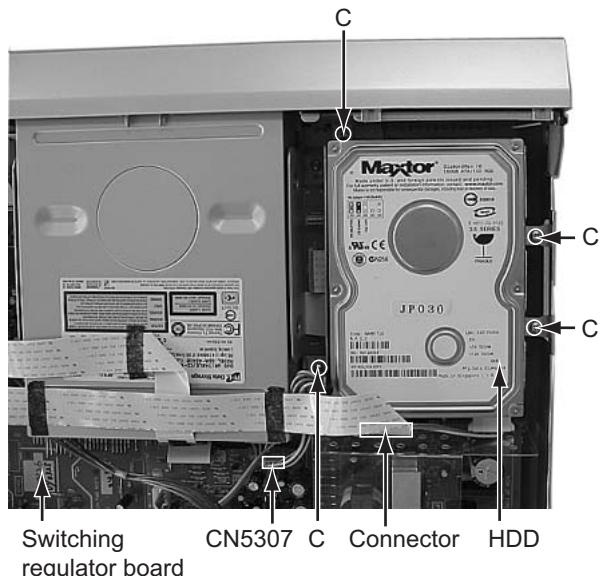


Fig.2

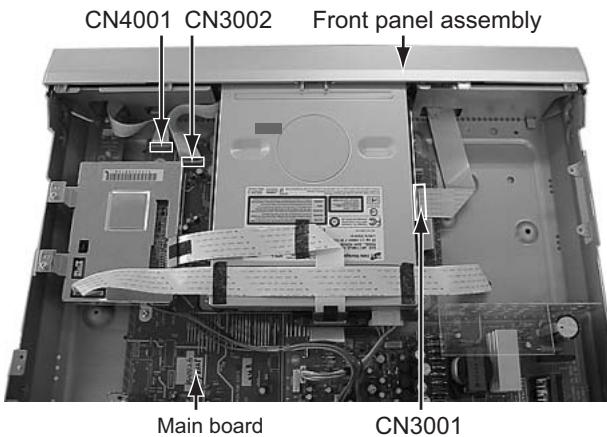


Fig.3

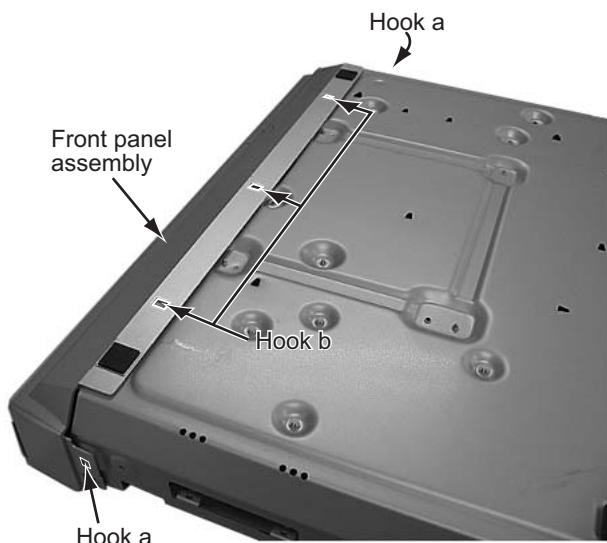


Fig.4

Front part of a chassis

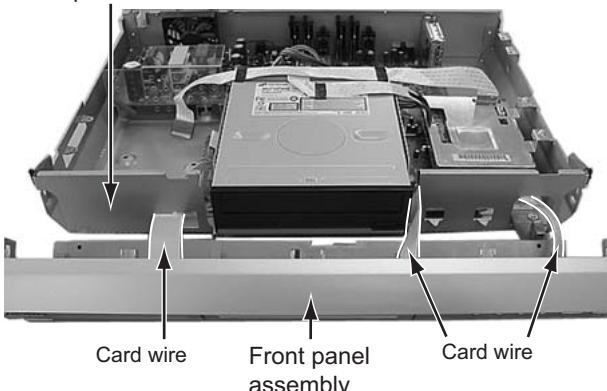


Fig.5

3.1.3 Remove the drive unit (See figure 6)

- Prior to performing the following procedure, remove the top cover.
- There is no need to remove the front panel assembly.
- (1) Disconnect the socket wire from connector [CN5303](#) on the switching regulator board.
- (2) Disconnect the card wire from connector [CN2201](#) on the digital board.
- (3) The tape which is fixing the card wire is removed two places.
- (4) Remove the four screws **D** attaching the drive unit.
- (5) Remove the one screw **E** attaching the lug wire.

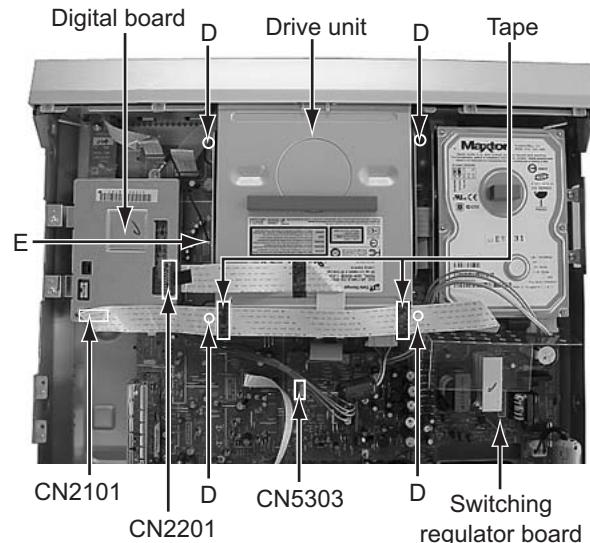


Fig.6

3.1.4 Remove the digital board (See figure 7, figure 8)

- Prior to performing the following procedure, remove the top cover.
- (1) Disconnect the card wire from connector [CN2201](#), [CN2101](#) on the digital board.
- (2) Disconnect the socket wire from connector [CN1003](#) on the digital board.
- (3) Remove the four screws **F** attaching the digital board.
- (4) Lift the digital board up, and remove it. Then, the digital board is removed from the connectors [CN4101](#), [CN4102](#) on the main board and [CN4104](#) on the jack board. In attaching the digital board, insert the connector on the digital board in these connectors securely.

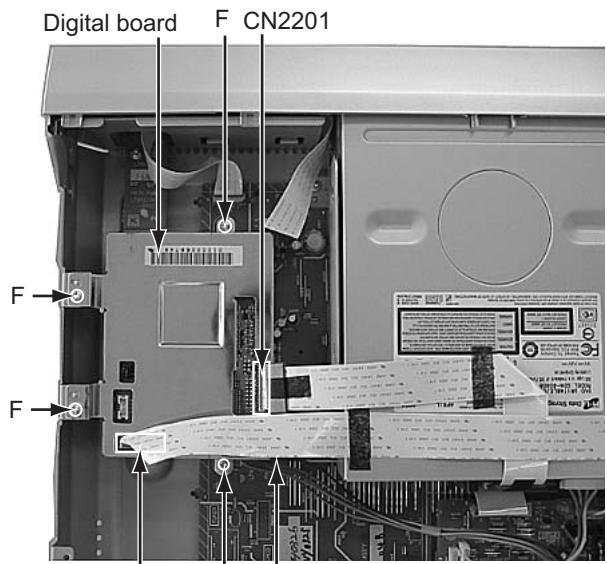


Fig.7

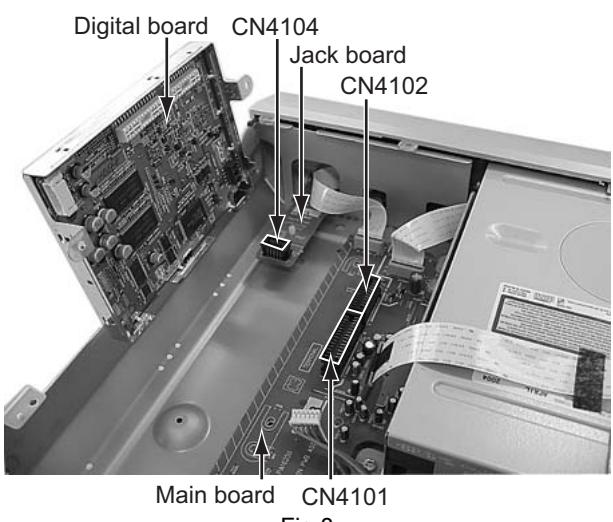


Fig.8

3.1.5 Remove the switching regulator board (See figure 9)

- Prior to performing the following procedure, remove the top cover.
- (1) Disconnect the card wire from connector [CN5301](#) on the switching regulator board.
- (2) Disconnect the socket wire from connector [CN5303](#), [CN5305](#), [CN5306](#), [CN5307](#) on the switching regulator board.
- (3) Disconnect the power cord from connector [CN5001](#) on the switching regulator board.
- (4) Remove the two screws **G** attaching the switching regulator board.
- (5) Four spacers are removed.

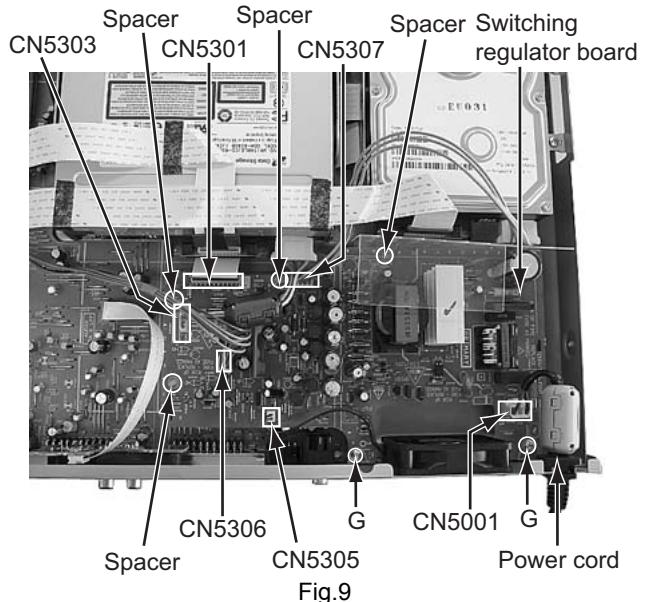


Fig.9

3.1.6 Remove the main board (See figure 10, figure 11)

- Prior to performing the following procedure, remove the top cover, drive unit, digital board, switching regulator board, HDD.
- (1) Disconnect the card wire from connector [CN3001](#), [CN3002](#), [CN4001](#), [CN7301](#) on the main board
- (2) Remove the two screws **H** attaching the main board.
- (3) Remove the seven screws **I** attaching the rear panel with main board.

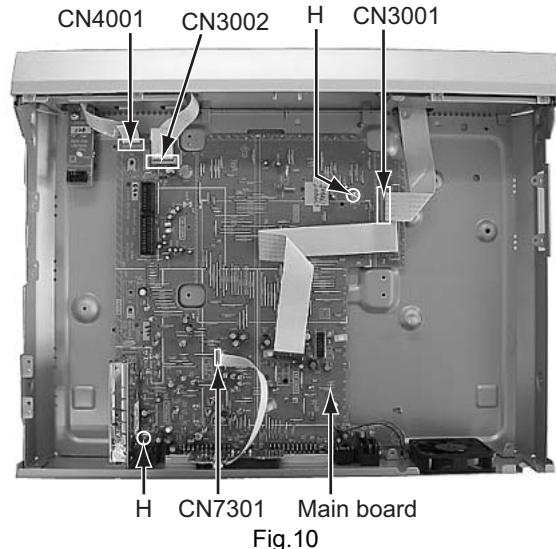


Fig.10

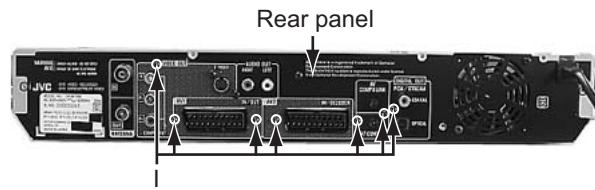


Fig.11

SECTION 4 ADJUSTMENT

4.1 Timer clock adjustment (for only ver.E,ER)

If an error comes to arise for a clock, the following procedure will adjust.

Signal	(A1)	No signal
Mode	(B)	EE
Equipment	(C)	Frequency counter
Measuring point	(D1) (D2) (D3)	IC3001 pin 61 IC3001 pin 17 C3026 + and -
Adjustment part	(F)	C3025 (TIMER CLOCK)
Specified value	(G1)	1024.008 ±0.001 Hz (976.5549 ±0.0010 usec)

- (1) Connect the frequency counter to the measuring point (D1).
- (2) Connect the short wire between the short point (D2) and Vcc (5V).
- (3) Short the leads of capacitor (D3) once in order to reset the microprocessor of the system controller.
- (4) Disconnect the short wire between the short point (D2) and Vcc then connect it again.
- (5) Adjust the Adjustment part (F) so that the output frequency becomes the specified value (G).

SECTION 5

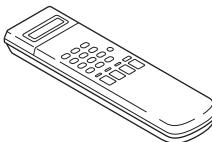
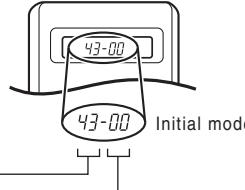
TROUBLESHOOTING

5.1 JIG Mode

The following remote control units are required to set and cancel JIG mode.

For setting : a remote control unit attached to product.

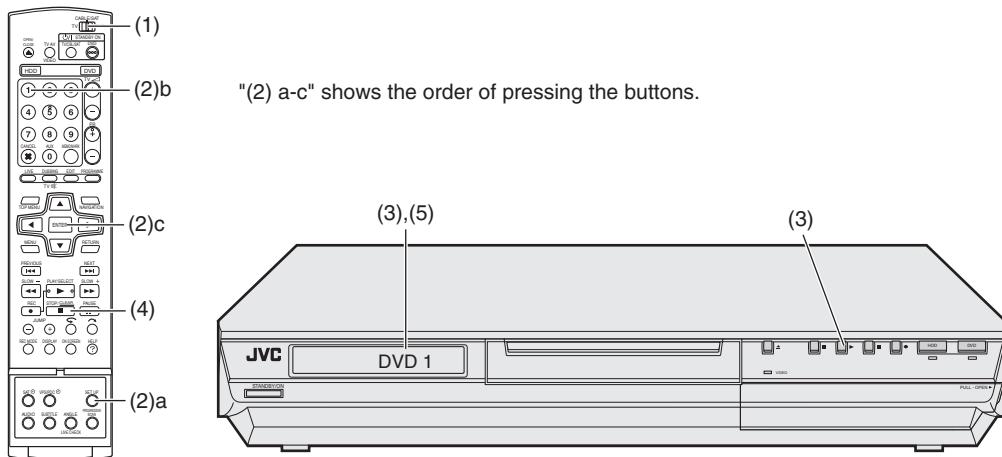
For cancellation : JIG remote control unit (part number : PTU94023B)

Remote control unit attached to product	JIG remote control unit
	 <p>JIG remote control unit [Data transmission] Set the data code, and then press the " " [] button.</p> <p>Custom code 43:A Code 53:B Code 6F:C Code 7F:D Code</p> <p>Data code</p> 

When the main body is set to JIG mode and when the main body is under JIG mode, the remote control unit attached to product operates only in "Remote Control Code 1". Since main body is in "Remote Control Code 3" when it is shipped and just after its batteries are changed, "Remote Control Code 3" needs to be changed to "Remote Control Code 1".

< Changing Remote Control Code >

- (1) Switch TV/CABLE/SAT/DVD Switch to "DVD"
- (2) Press the numeric button "1" of the remote control unit while pressing the "SET UP" button of the remote control unit. Then, press the "ENTER" button, and then release the "SET UP" button.
- (3) Press the "PLAY" button of the main body for five seconds or longer while the main body is in stand-by mode, and a current remote control code of the main body is displayed in FL indicator of the main body.
- (4) While keeping the state of (3), press the "STOP" button of the remote control unit toward the main body.
- (5) The code that was set by the remote control unit blinks for 5 seconds, before the code is set to the main body. When the FL indicator changes to "DVD 1", it shows that the Remote Control Code has been changed to "1".



5.1.1 Setting JIG mode

To display SYSTEM INFO or to update firmware, the main body needs to be set to JIG mode.

- (1) Turn the main body ON.
- (2) Press the buttons of the remote control unit attached to product in the following order : "SET UP" → "2" → "8" → "ENTER"
- (3) When a colon ":" between "hour" and "minute" of a clock in FL indicator blink, it means that the main body has been set to JIG mode properly.

[Example]

Not in JIG mode

In JIG mode

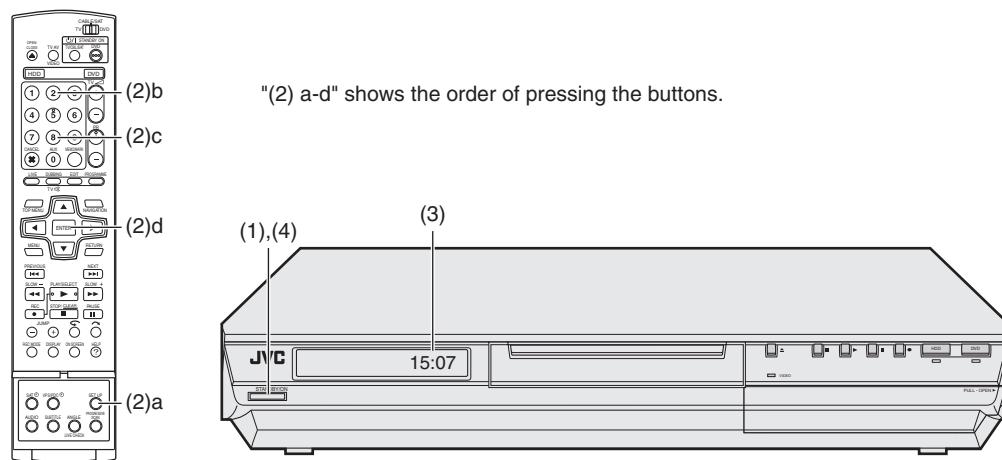
15 : 07

1507

A colon blinks.

(4) Turn the main body OFF, and then turn it ON again.

*Once the main body is set to JIG mode, the JIG mode cannot be cancelled even if the power cord is pulled out from the wall socket.



5.1.2 Canceling JIG mode

- (1) Transmit "43-9D" to the main body by using JIG remote control unit.
- (2) A colon ":" between "hour" and "minute" of a clock in FL indicator light.
- (3) Turn the main body OFF, and then turn it ON again.

NOTE:

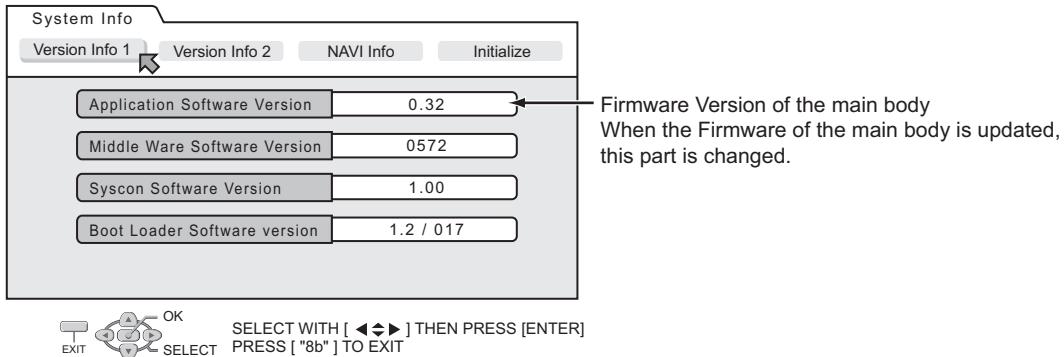
After repair work, be sure to cancel JIG mode. Before returning product to a user, confirm that a colon ":" between "hour" and "minute" of a clock in FL indicator light.

5.2 Displaying SYSTEM INFO

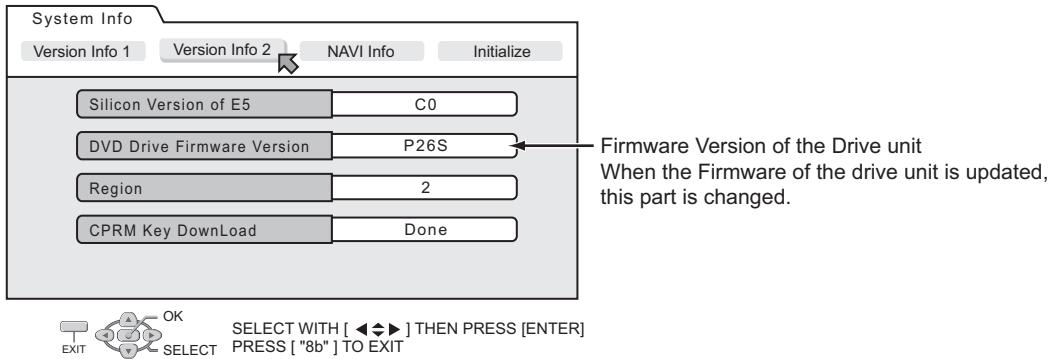
In the SYSTEM INFO there is information including Firmware Versions of the main body and the drive unit.

- (1) Set the main body to JIG mode.
- (2) Transmit "43-8B" to the main body by using JIG remote control unit.
- (3) SYSTEM INFO menu is displayed in the television screen.
- (4) To move cursor in SYSTEM INFO, use the "▲", "▼", "◀", and "▶" buttons of a remote control unit attached to product.

The example of a display < Version Info 1 >



The example of a display < Version Info 2 >



NOTE :

Items other than the ones described above are not used in service work.

- (5) To quit the SYSTEM INFO menu, transmit "43-8B" to the main body by using JIG remote control unit.
- (6) Cancel JIG mode.

5.3 Updating the firmware of the main body

- Firmware update disc supports CD-R media.
- When firmware update is necessary, information is available from the homepage of DIGITAL VIDEO STORAGE CATEGORY, CS group.

5.3.1 Creating an update disc

Please check the details of the update disc creation method by JS-NET.

(1) Down load the update file from JS-NET. The file name is "hdd_u.udx".

(2) Write the update file into CD-R. Pay attention in the following points when writing the update disc.

- Make sure to write in "Disc at Once".
- Set the file compatibility to "ISO9660 format". (ROMEO, JOLIET are disapproved.)
If the writing method is not correct, the update results in an error.

5.3.2 Update procedure

- There are two methods of updating firmware, using JIG mode <method 1> or not using JIG mode(User update mode) <method 2>. Updating can be operated in either method.

<Method 1>

(1) Set to the JIG mode.

(2) Load the update disc on the tray, and then close the tray.

(3) When the disc reading operation is completed, transmit "43-70" with the JIG remote control unit.

If the update disc is not correct, FL indicator displays an "ERROR" after transmitting "43-70". Transmit "43-70" once and make the FL indicator to normal display, and then reload the disc then transmit "43-70" again.

(4) "UPDATE" is displayed in the FL indicator, and the FL indicator changes to "FL UPDATE" afterwards. It takes approx. 2 minutes for the change.

(5) Remove the disc as the tray is ejected, and then transmit "43-70" with the JIG remote control unit. Then the FL indicator changes from "UPDATE" to the normal display.

(6) Close the tray and turn the main body OFF. Pull out the power code from the wall socket, then plug the power cord into the wall socket again.

(7) When "LOADING" in the FL indicator disappears, turn the main body ON.

(8) Display the SYSTEM INFO menu, and check the version of the firmware.

(9) Cancel the JIG mode.

<Method 2>

(1) Turn the power ON. Load the update disc on the tray and close the tray.

(2) When the disc reading operation is completed, turn the power OFF.

(3) Keep pressing the "PAUSE" button and the "POWER" button at the same time. (Until FL indicator changes to "UPDATE").

(4) In approx. 2 minutes the tray is ejected. Remove the disc and close the tray.

(5) Reset operation is carried out automatically, and it becomes standby condition.

(6) Then, display the SYSTEM INFO menu in the JIG mode and check the version.

5.4 Updating the firmware of the drive unit

- Firmware update disc supports only DVD-RAM media.
- When firmware update is necessary, written discs are distributed by DIGITAL VIDEO STORAGE CATEGORY, CS group.

(1) Turn the main body ON.
(2) Load the update DVD-RAM disc on the tray and close the tray.
(3) "READING" is displayed in the FL indicator and the update is started.
(4) In a short while "READING" in the FL indicator disappears, open the tray to remove the disc and close the tray.
(5) Turn the power OFF and pull out the power code from the wall socket, then plug the power cord into the wall socket again.
(6) Set to the JIG mode and check the firmware version of the drive.

5.5 Taking out a disc

<Method 1>

There is a forced tray eject mode with electrical operation.

- (1) Right after plugging in the power code (while "LOADING" is displayed), keep pressing the OPEN/CLOSE button of the main body.
- (2) Remove the disc as the tray is ejected in a short while.
- (3) Make sure to close the tray afterwards.

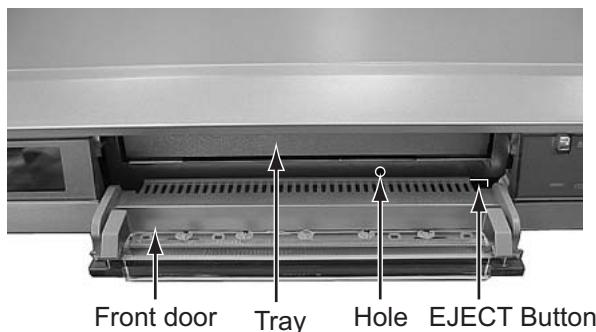
<Method 2>

When the disc cannot be removed by operating above <Method 1>, open the front door of the main body manually and directly press the EJECT button located in the lower right of the drive unit.

<Method 3>

When neither <Method 1> nor <Method 2> can remove the disc, the tray can be ejected mechanically without turning the power on.

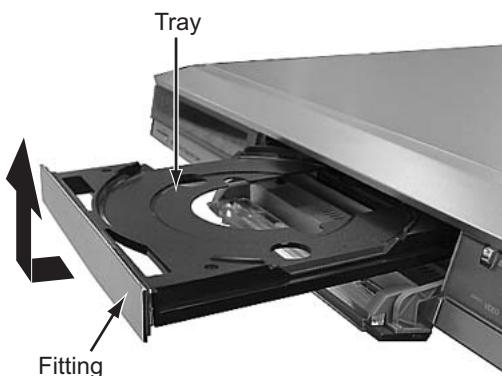
- (1) Open the front door of the main body manually.
- (2) Insert a fine wire (e.g. a straightened paper clip) into the hole in the lower part of the tray of the drive unit.
- (3) As the tray ejects a little, pull out the tray manually.



5.6 Exchanging the fitting

As the fitting that comes with the service drive unit cannot be used, make sure to attach a service fitting when the drive unit is exchanged. The fitting that is removed from the old drive unit can be attached to the new drive unit.

The fitting can be removed by pulling upwards while opening out the lower part of the fitting outwards.



5.7 Initialization to the factory shipment state

When the initialization is operated, internal information changes as follows. It is essential to obtain the client's permission before the operation.

- All DVD library is all deleted.
- All the DVD initial settings go back to the initial status.
 - (1) Set to the JIG mode.
 - (2) Transmit "43-6F" with the JIG remote control unit.
 - (3) FL indicator displays "FACTORY", and changes to "CHECK OK" after blinking for a short while.
 - (4) Pull out the power code from the wall socket.
- (5) The JIG mode is forced to cancel at the same time with the initialization, check whether the JIG mode is canceled by plugging the power code into the wall socket again. (The colon ":" in time display should be continuously ON, not blinking.)
If the JIG mode is not canceled, transmit "43-9D" with JIG remote control unit to cancel the JIG mode.

5.8 Setting after the drive unit replacement

When the drive unit is replaced, it is necessary to set a region code. Service drive units for replacement are not set for any region code, and they are in an indefinite condition.

Make sure to set region code after attaching the drive unit to the main body.

Without the setting of the region code, discs that have regions cannot be played back.

5.8.1 Creating a region setting disc.

Please check the details of the region setting disc creation method by JS-NET.

- (1) Download the region setting file from JS-NET. The file name is "region.bin".
- (2) Write the region setting file into CD-R. Pay attention in the following points when writing the file into CD-R.
 - Make sure to write in "Disc at Once".
 - Set the file compatibility to "ISO9660 format". (ROMEO, JOLIET are disapproved).
If the writing method is not correct, the normal setting cannot be performed.

5.8.2 Setting the region

- (1) Set for the JIG mode.
- (2) Load the region setting disc on the tray, and then close the tray.
- (3) When the disc reading operation is completed, transmit "43-70" with the JIG remote control unit.
- (4) FL indicator changes to "UPDATE". Remove the disc as the tray will open for a few seconds.
- (5) Then, check whether the FL indicator is "REGION 2".
- (6) Transmit "43-70" with the JIG remote control unit. When FL indicator changes to "OPEN", close the tray.
- (7) Turn the power OFF, and pull out the power code, and then plug the power code in again.
- (8) Cancel the JIG mode.

JVC

SCHEMATIC DIAGRAMS

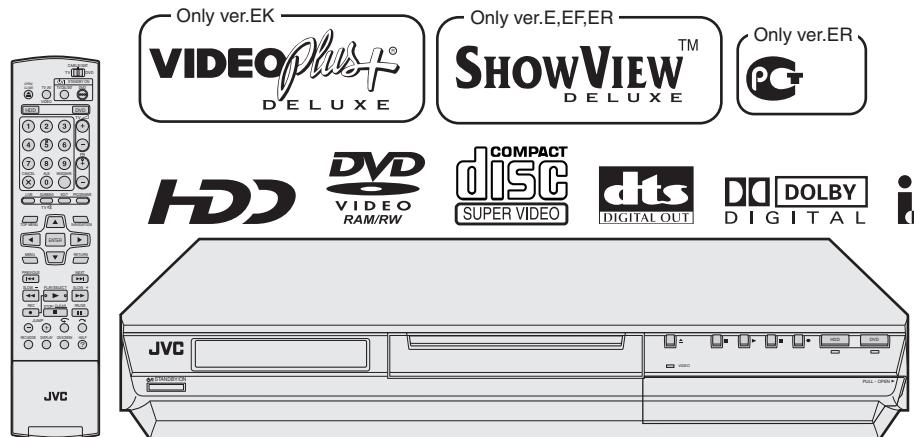
DVD & HDD VIDEO RECORDER

DR-MH20SE, DR-MH20SEK, DR-MH20SEF
DR-MH30SE, DR-MH30SEK
DR-MH30SEF, DR-MH30SER

CD-ROM No.SML200409

Area Suffix

EK ----- U.K.
EF ----- France
ER ---- Russian Federation
E ----- Continental Europe
Northern Europe



DR-MH20SE, DR-MH20SEK, DR-MH20SEF [D4HR20]
DR-MH30SE, DR-MH30SEK, DR-MH30SEF, DR-MH30SER [D4HR25]

Since the whole mechanism assembly unit is replaced, the DVD recorder mechanism of this unit need not be adjusted.

CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions

The Components identified by the symbol  are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

- 1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K: KΩ(1000Ω), M: MΩ (1000KΩ)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

2. Indications of control voltage

AUX : Active at high.

 or AUX(L) : Active at low.

3. Interpreting Connector indications



Removable connector



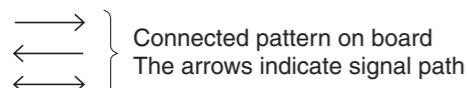
Wire soldered directly on board



Non-removable Board connector



Board to Board

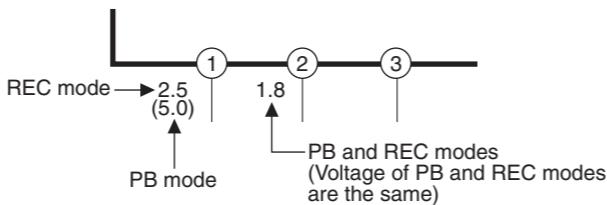


Connected pattern on board
The arrows indicate signal path

Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

- 1) Regulator (DC/DC CONV) circuits
REC : Colour bar signal.
PB : Alignment tape (Colour bar).
— : Unmeasurable or unnecessary to measure.
- 2) Indication on schematic diagram
Voltage indications for REC and PB mode on the schematic diagram are as shown below.



Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



CIRCUIT BOARD NOTES

1. Foil and Component sides

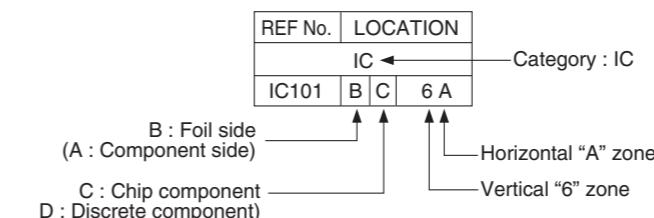
- 1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.

- 2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

Parts location are indicated by guide scale on the circuit board.

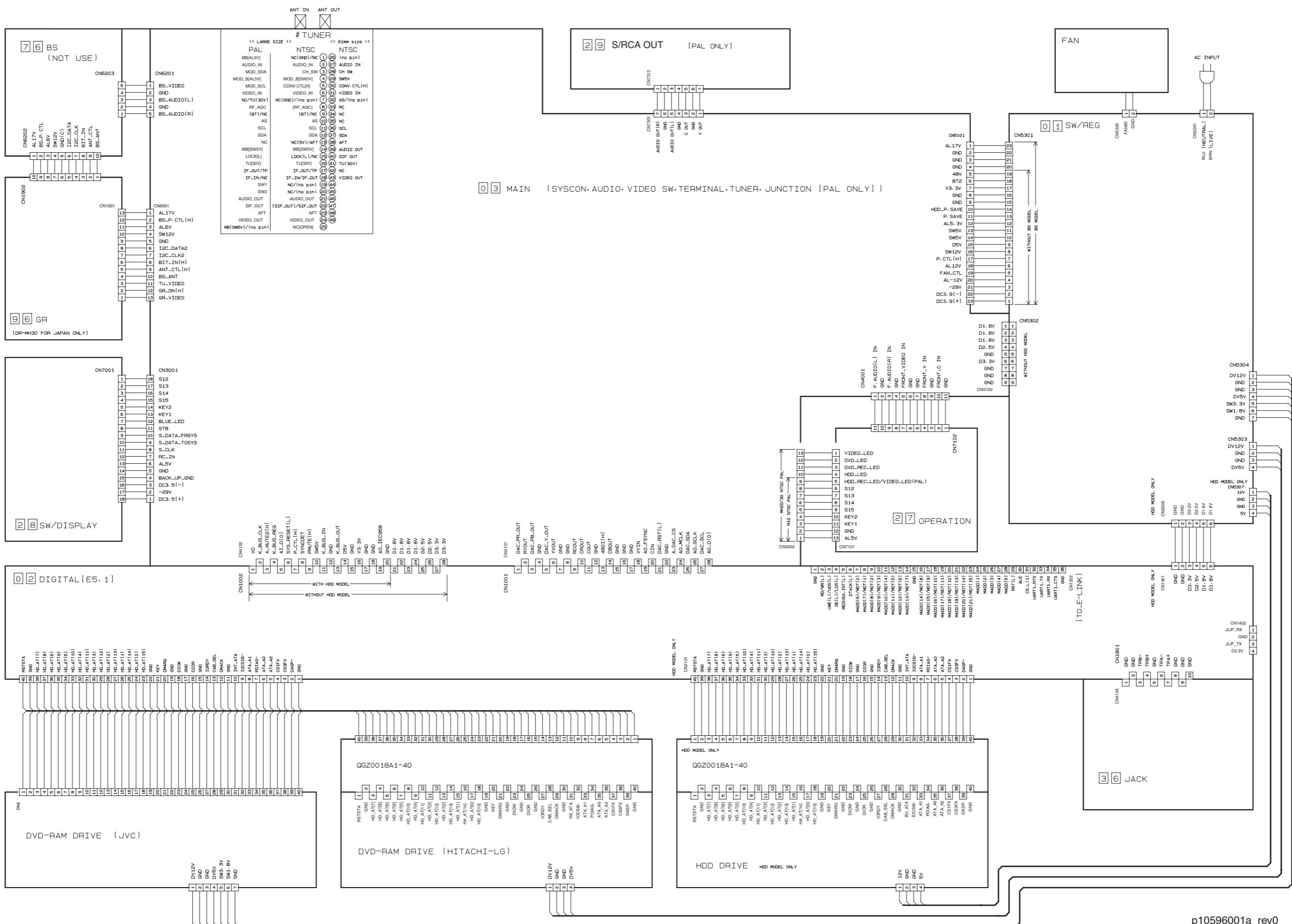
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



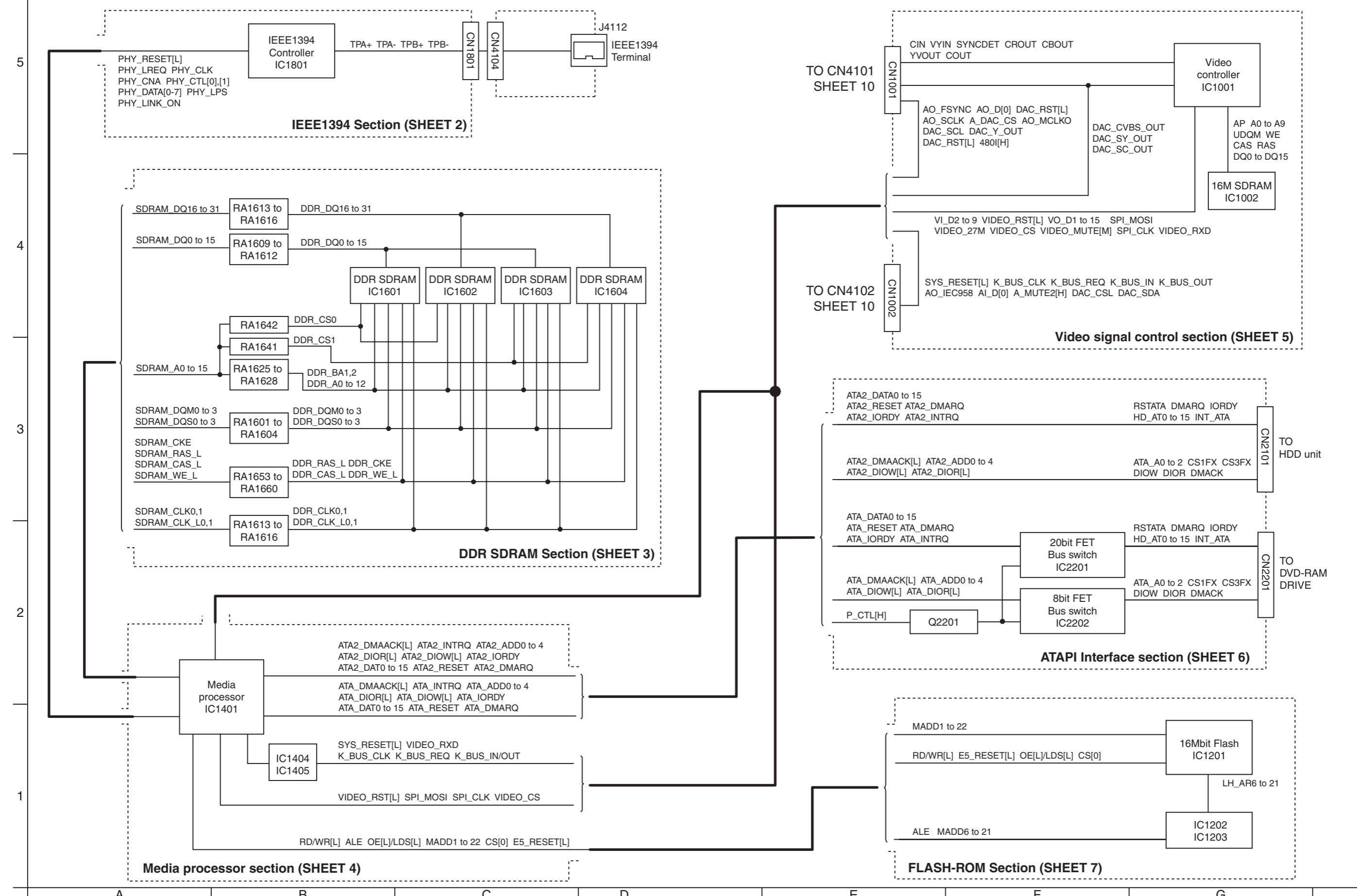
Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

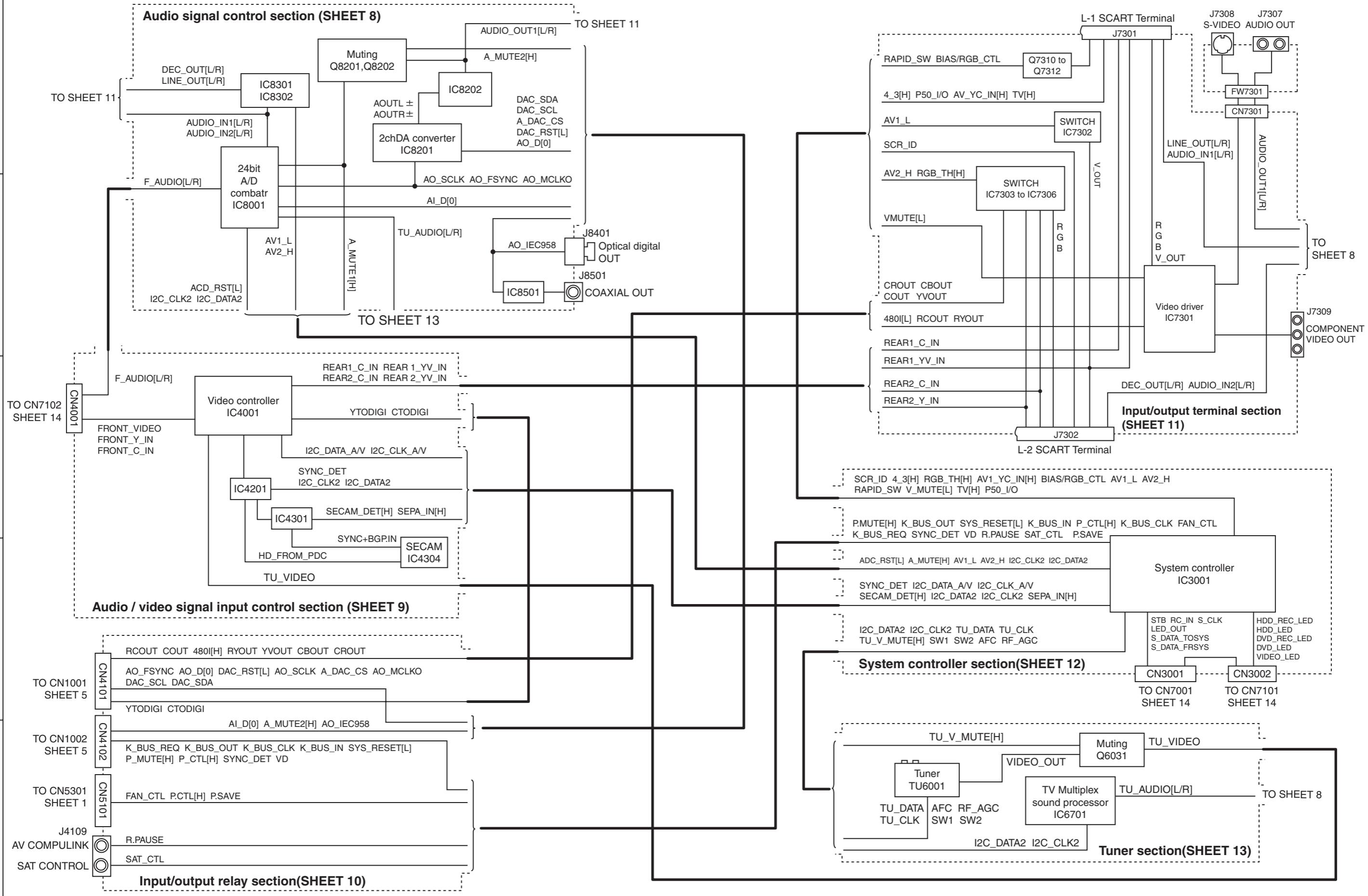
Wiring diagram



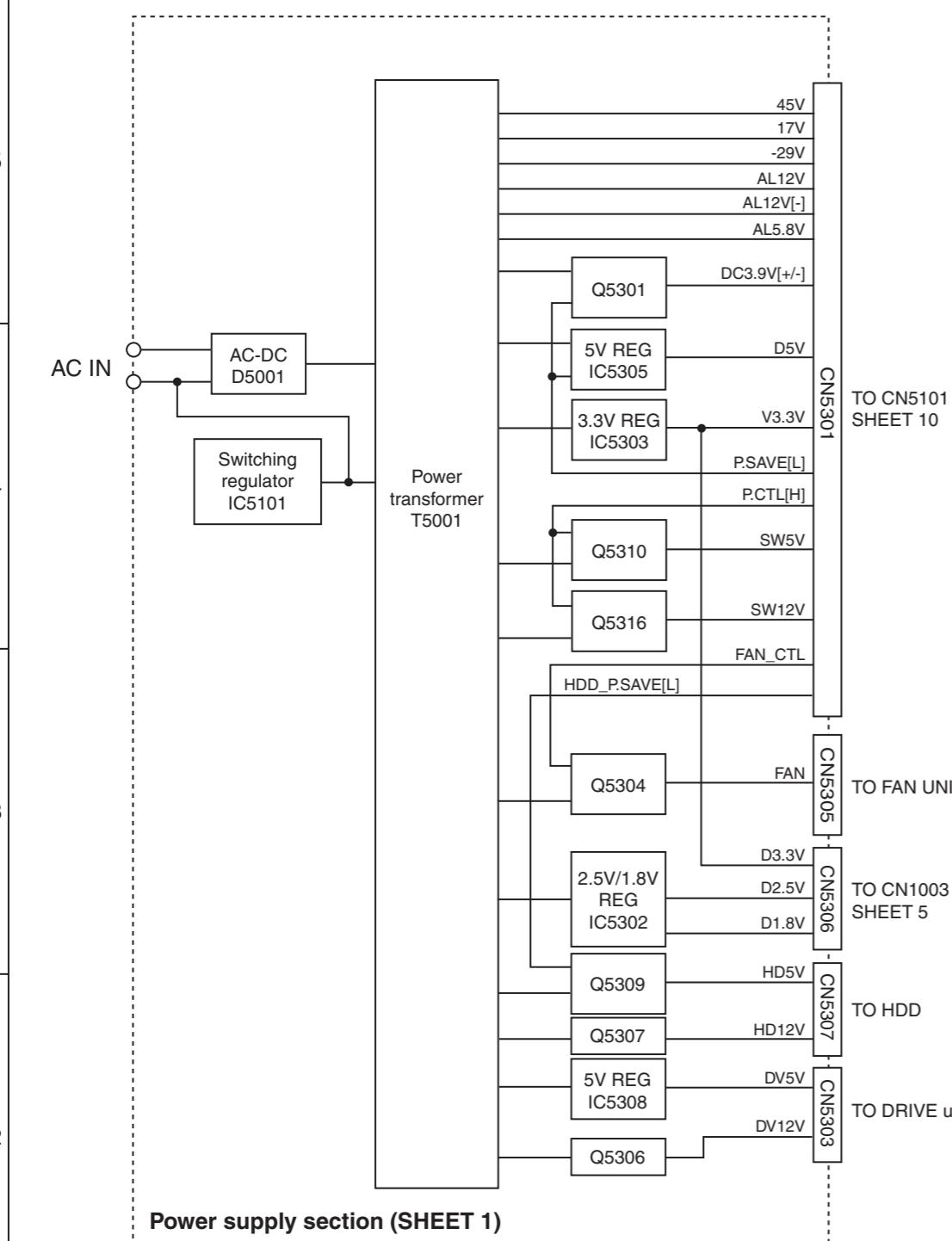
Block diagrams

DIGITAL 0 2

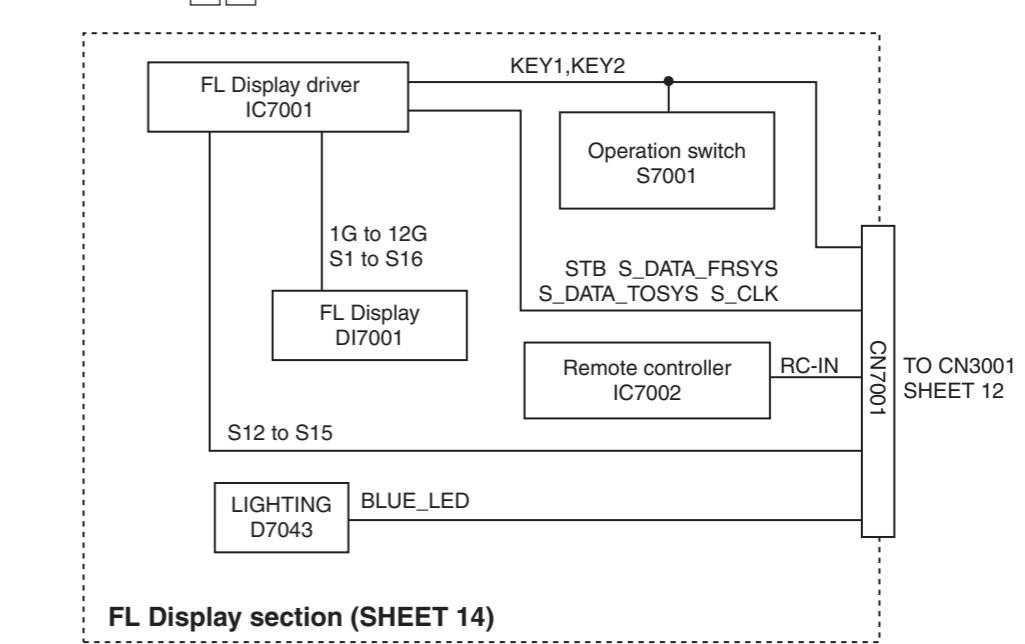




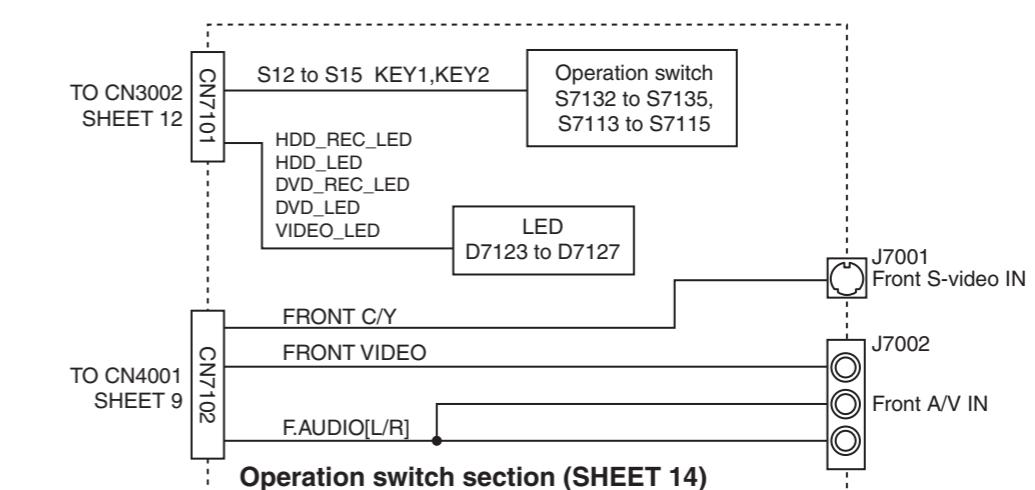
■ SW.REG 0 1



■ SW/DISPLAY 2 8

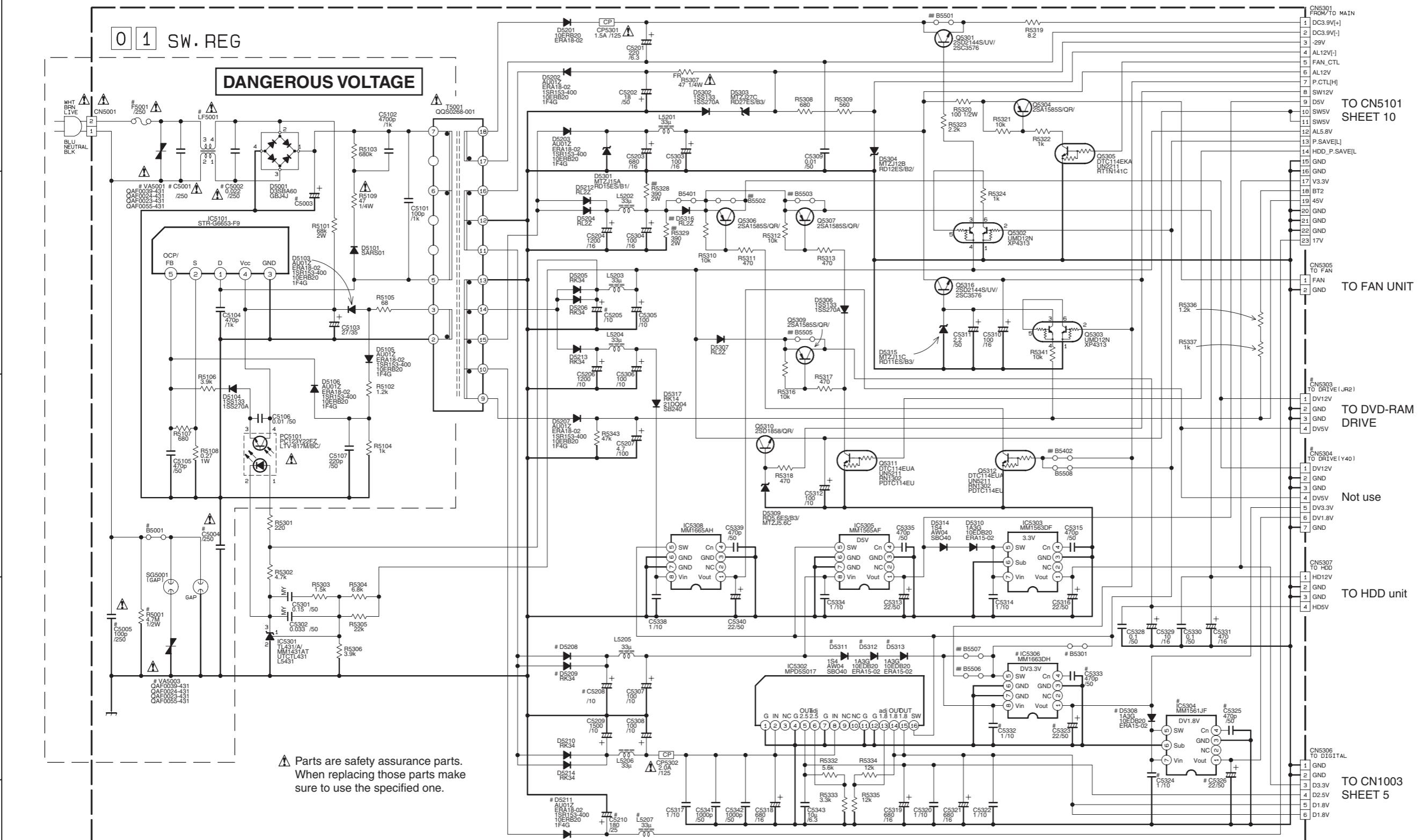


■ OPERATE 2 7

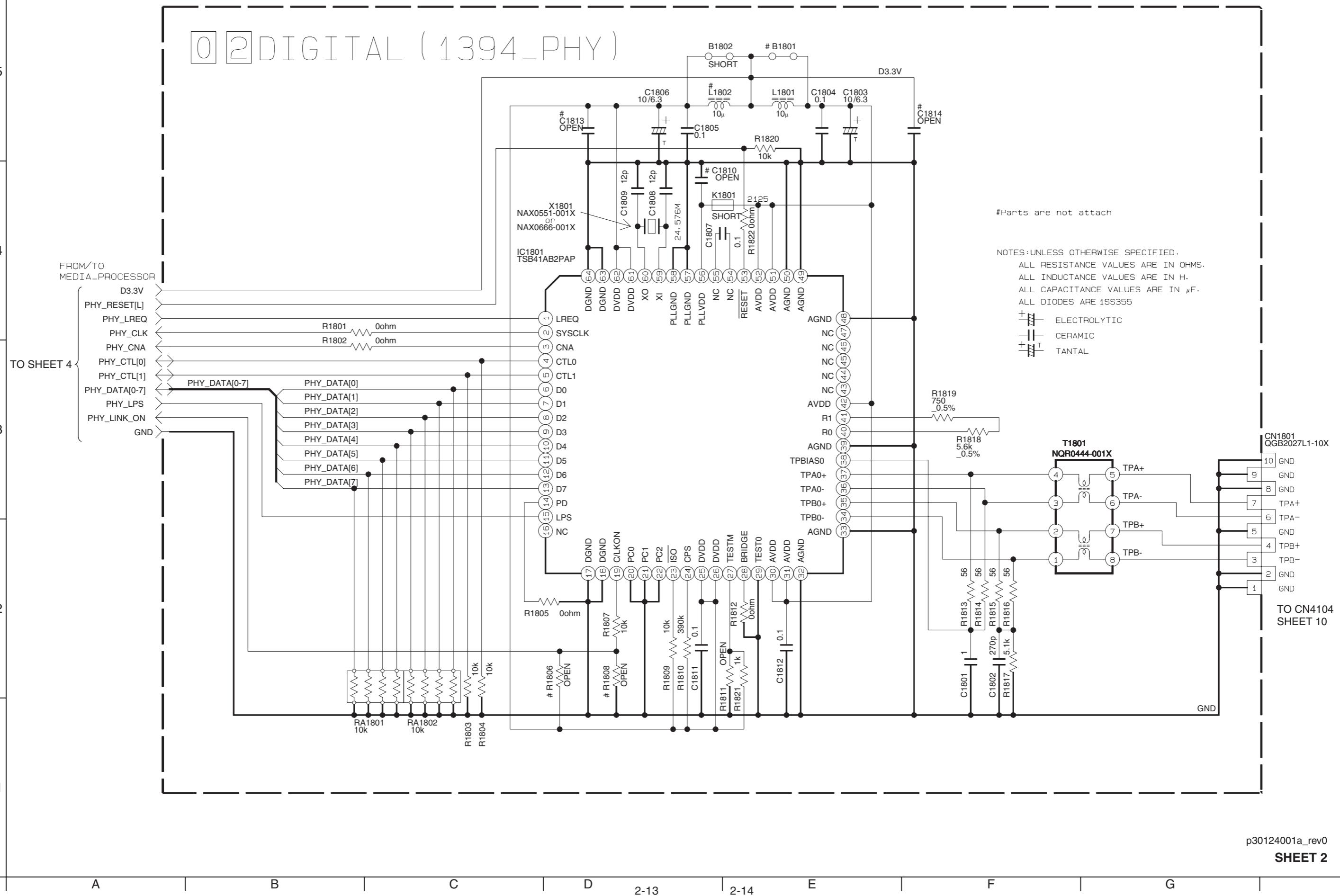


Standard schematic diagrams

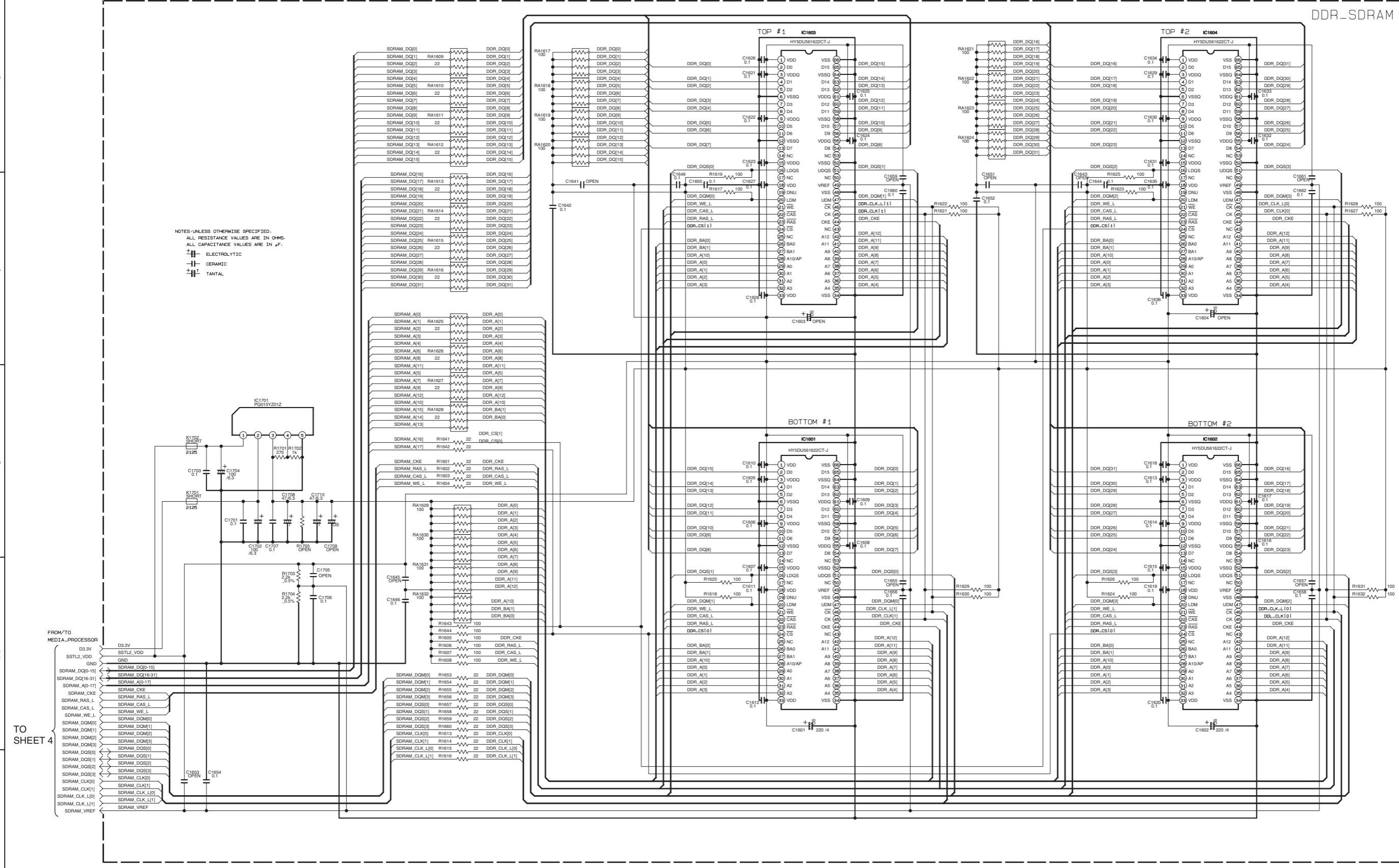
■ Power supply section



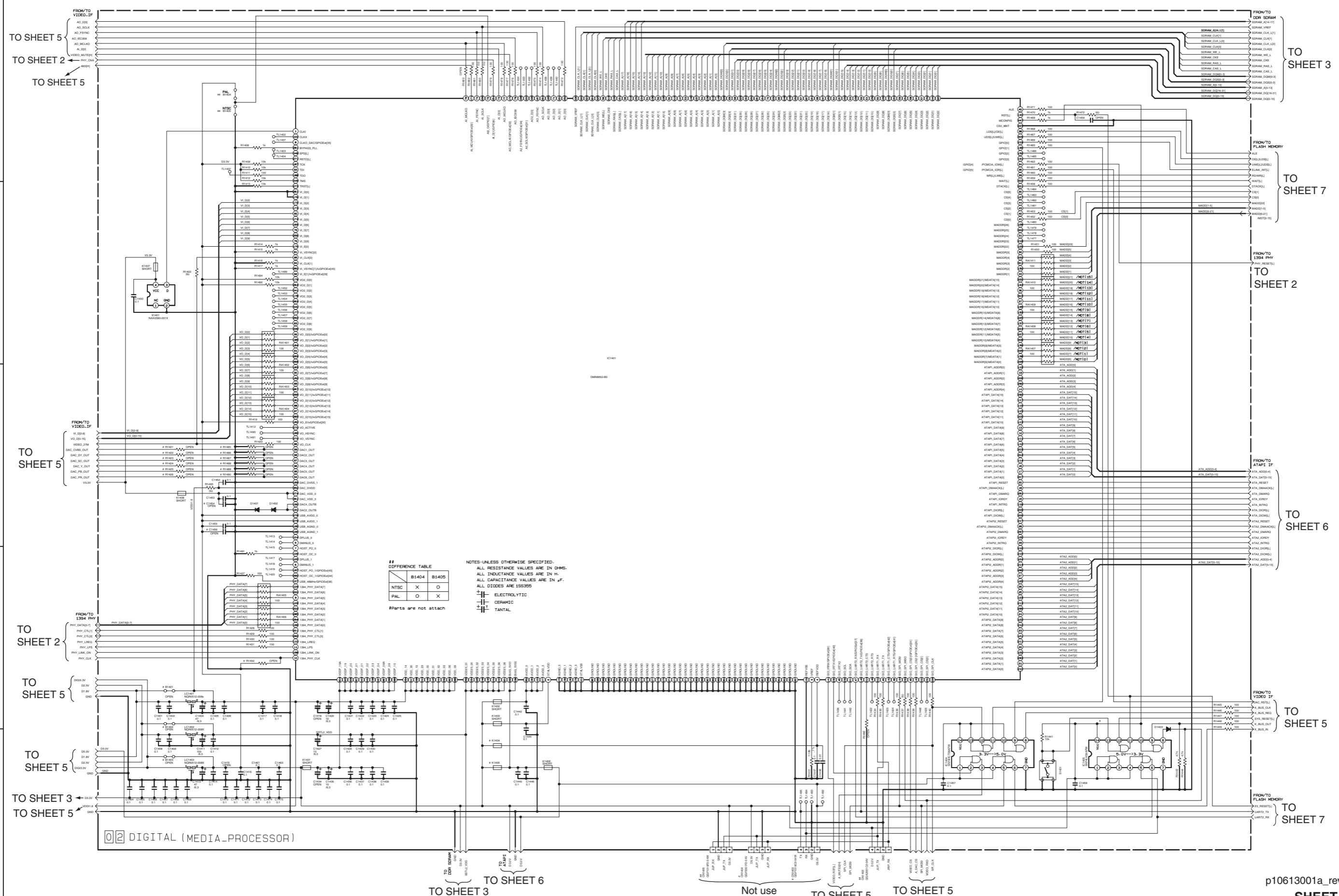
■ IEEE1394 Section



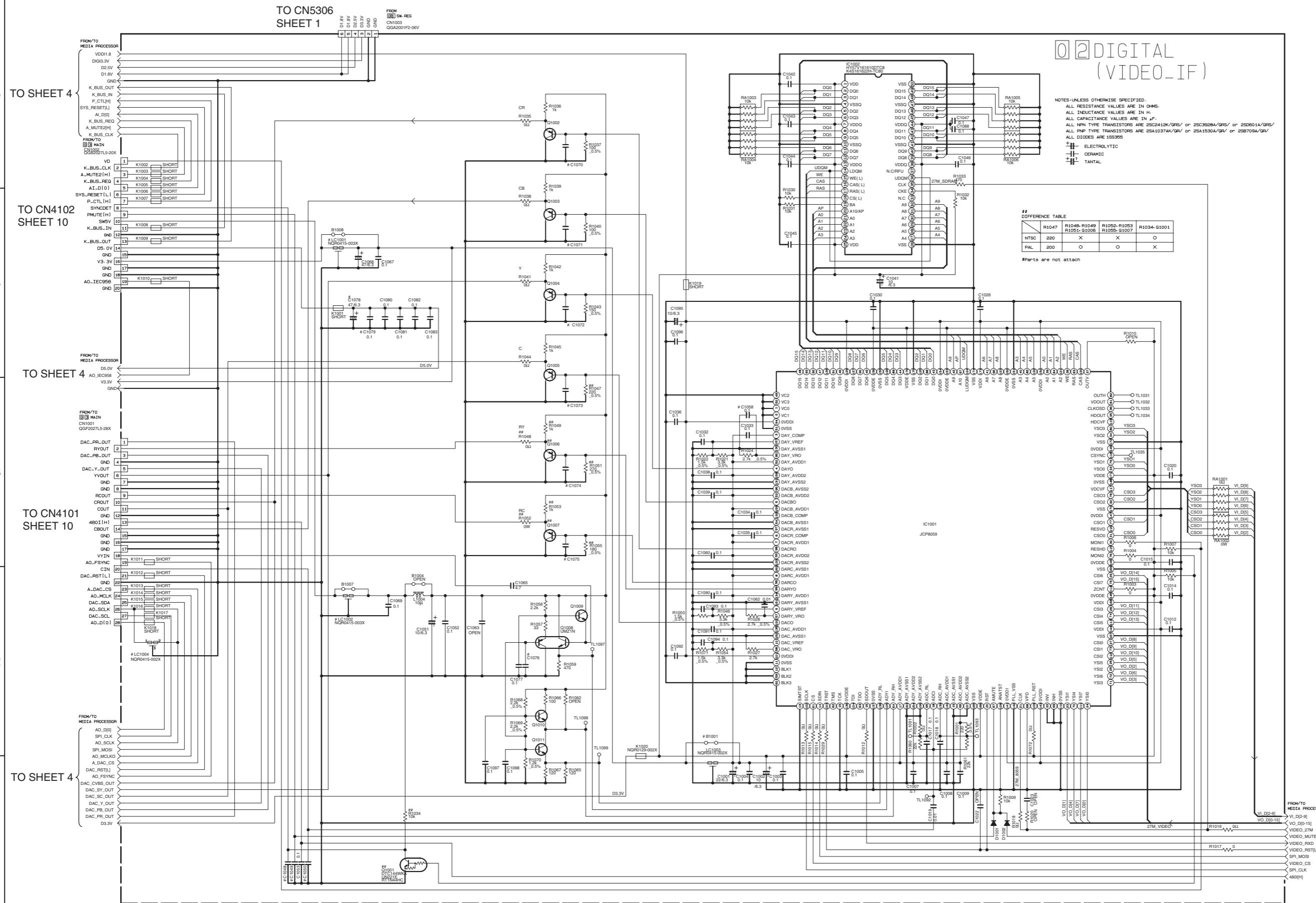
■ DDR SDRAM Section



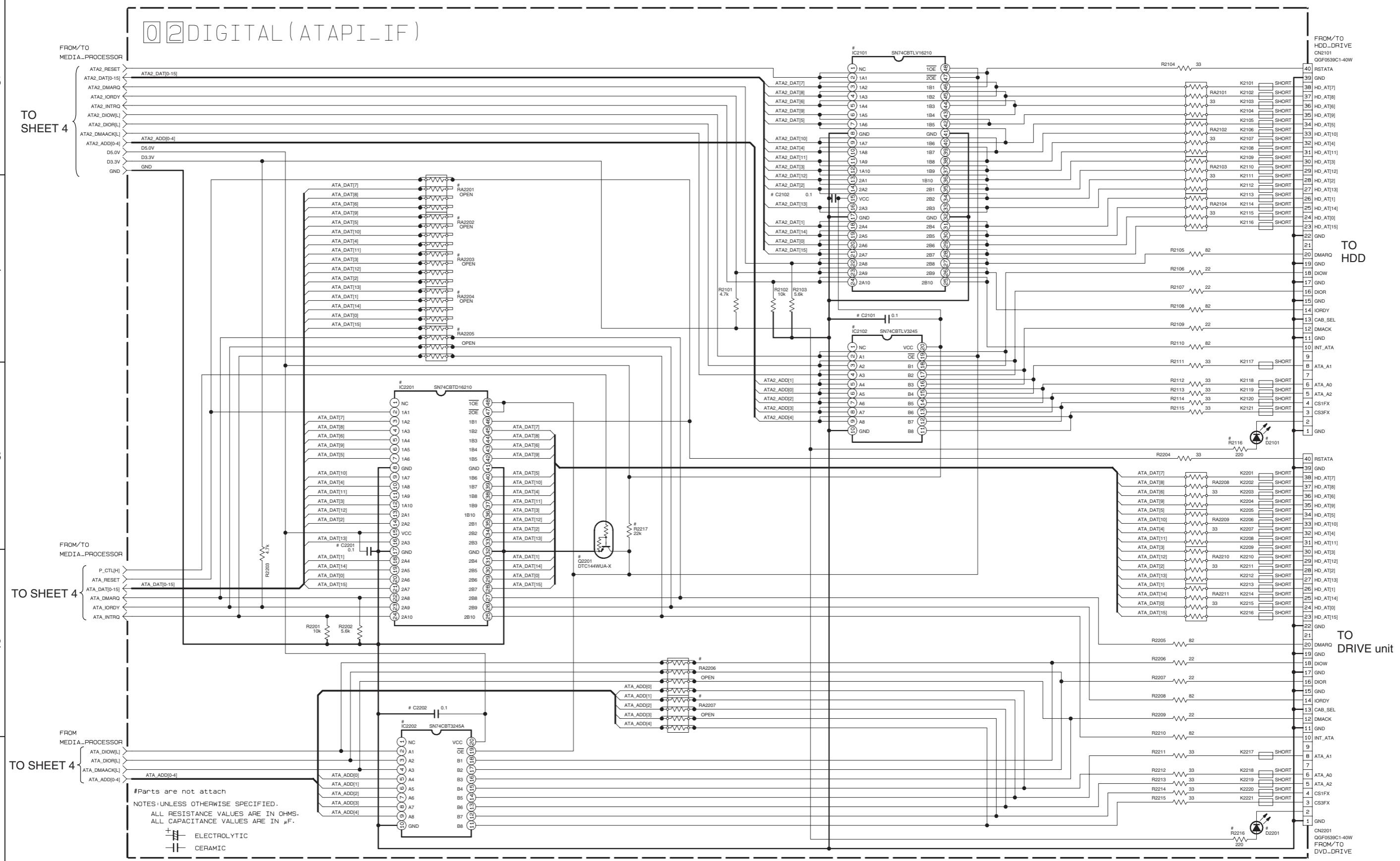
■ Media processor section



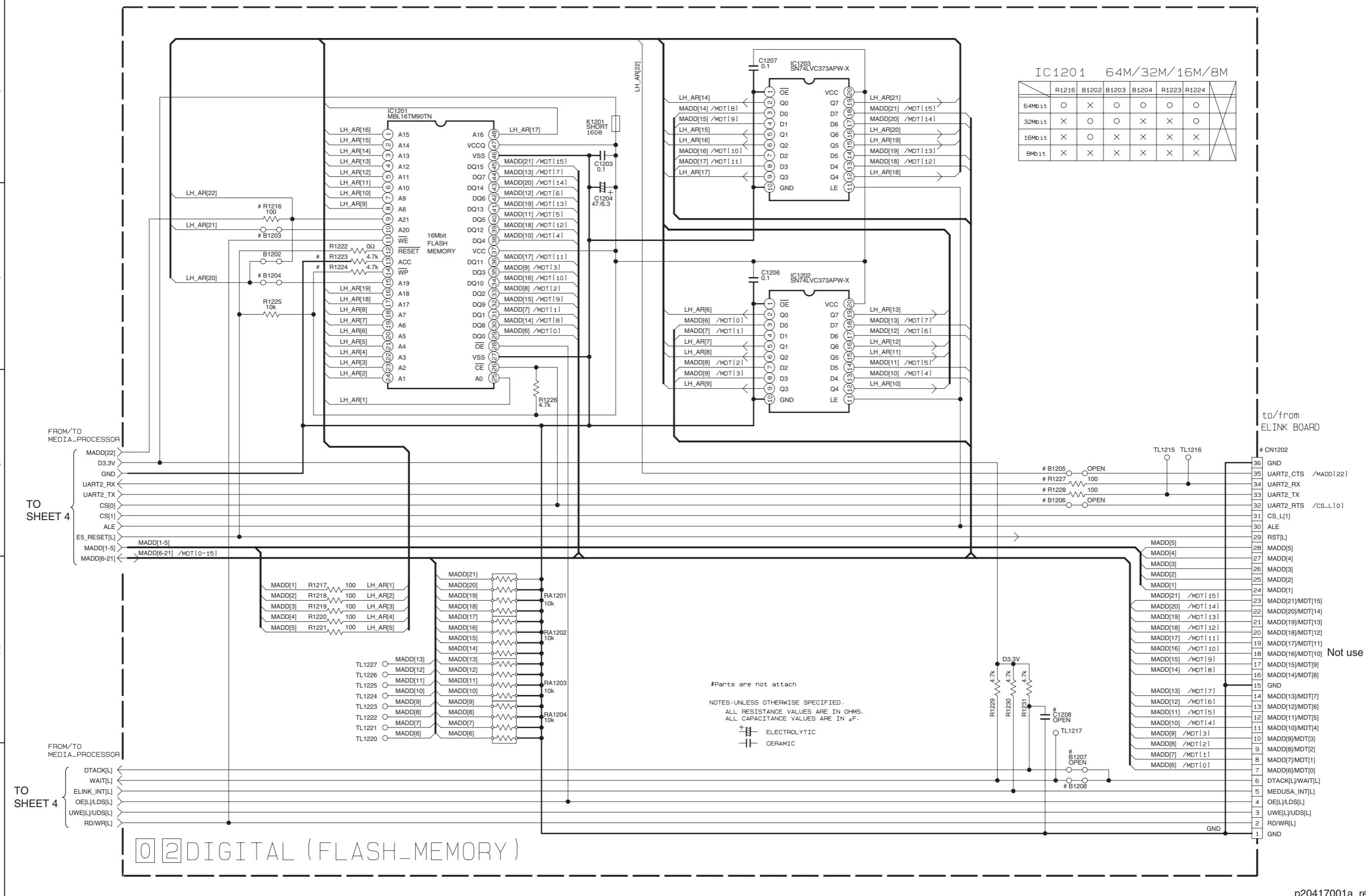
■ Video signal control section



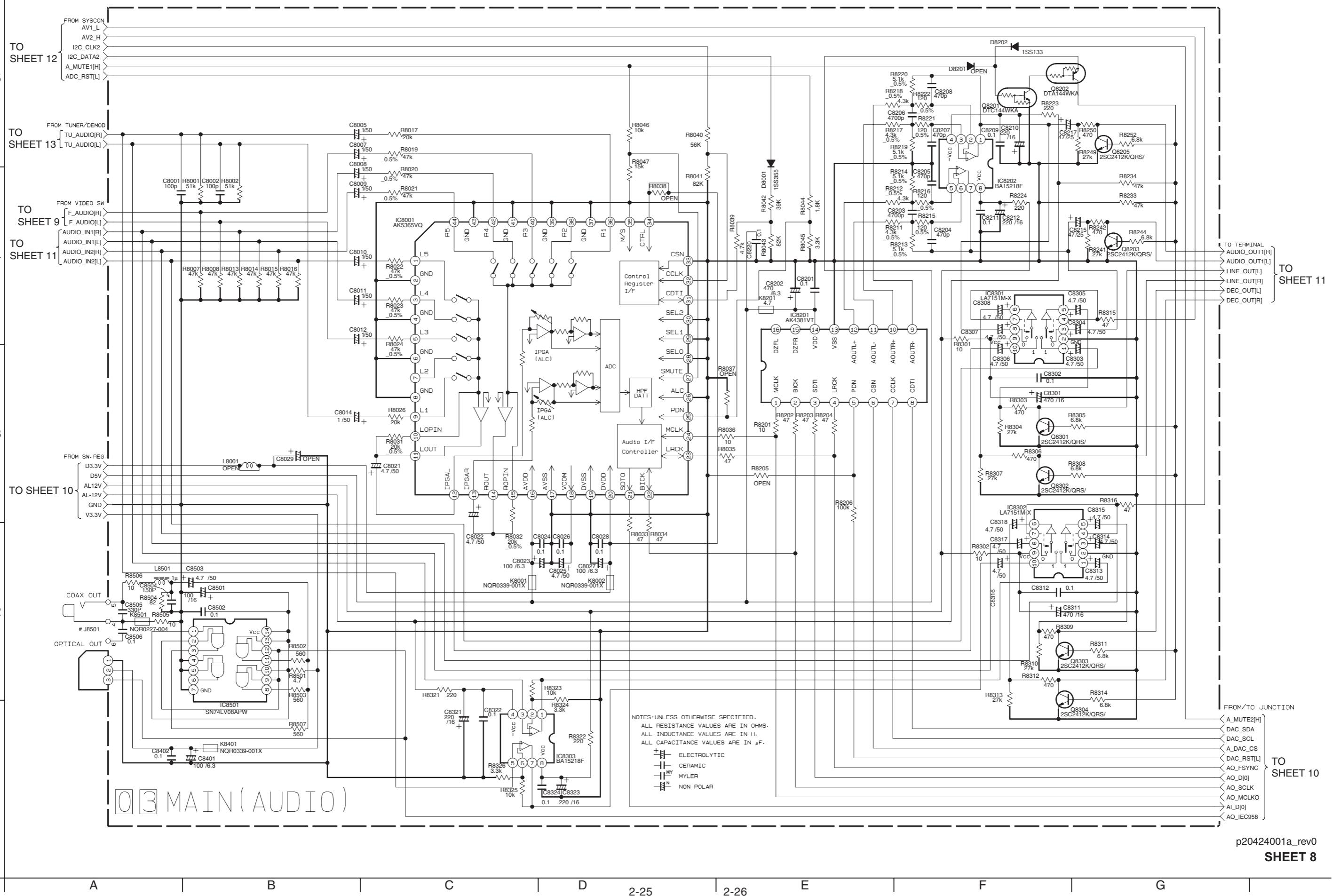
■ ATAPI Interface section



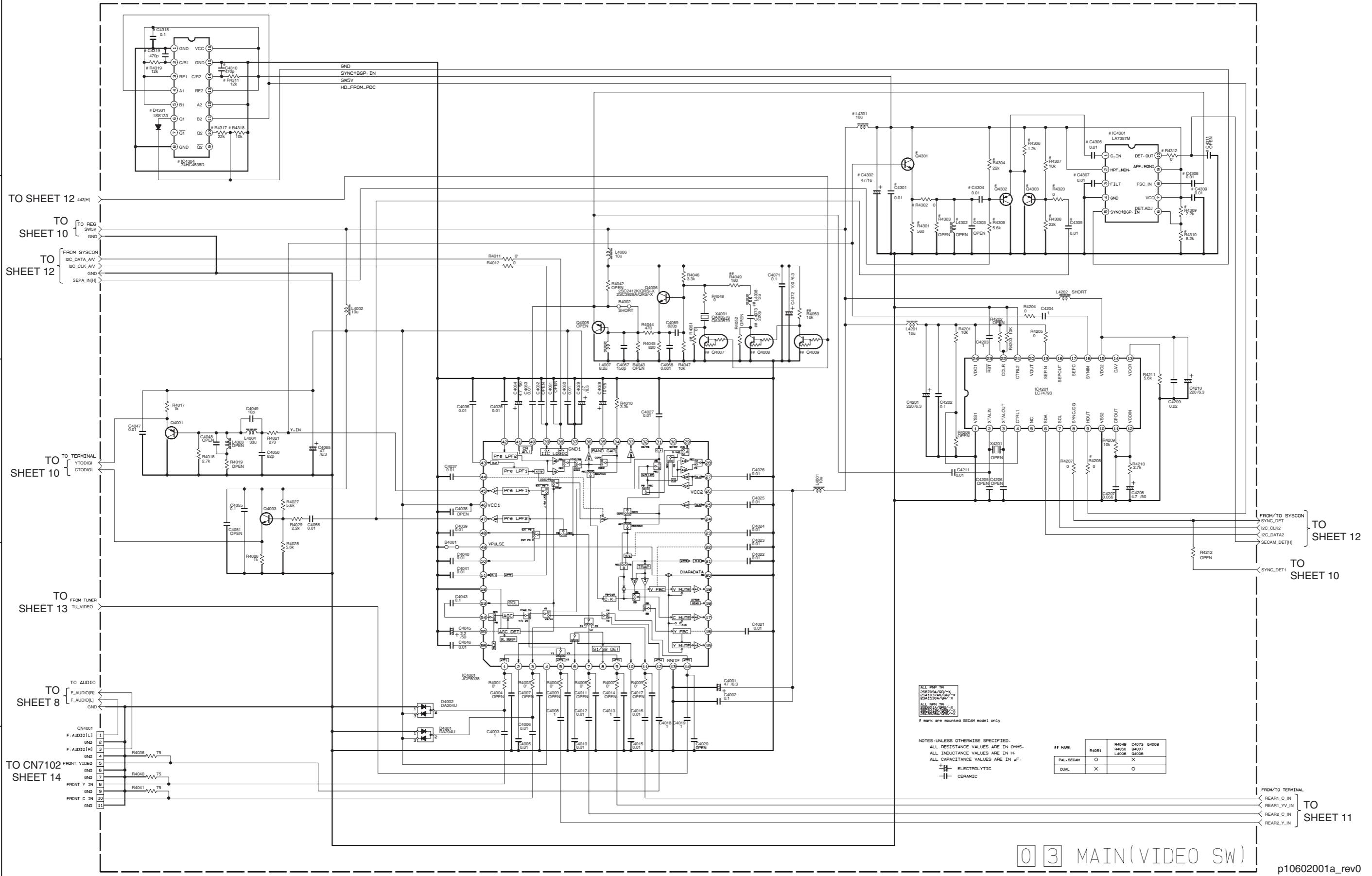
■ FLASH-ROM Section



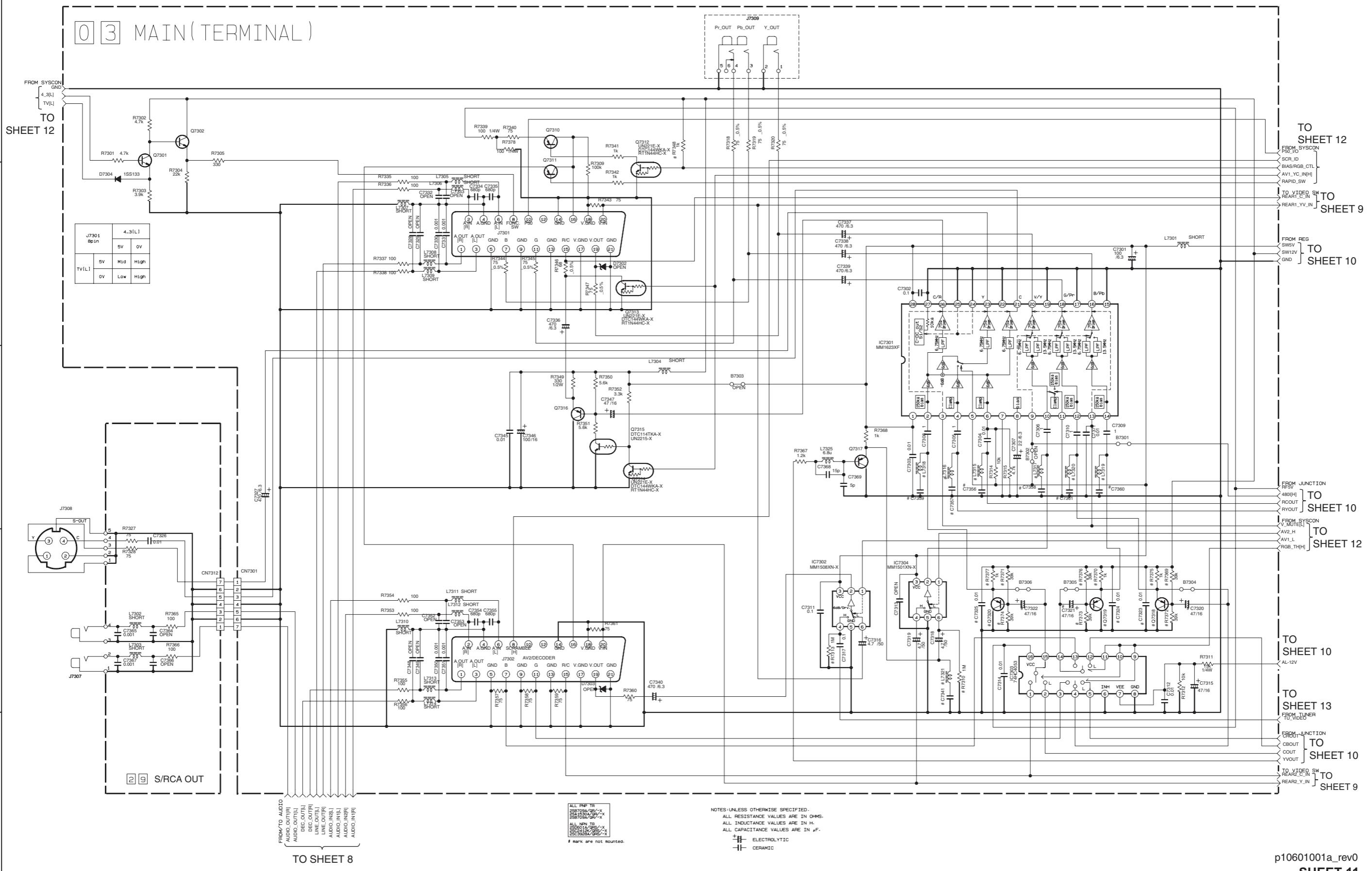
■ Audio signal control section



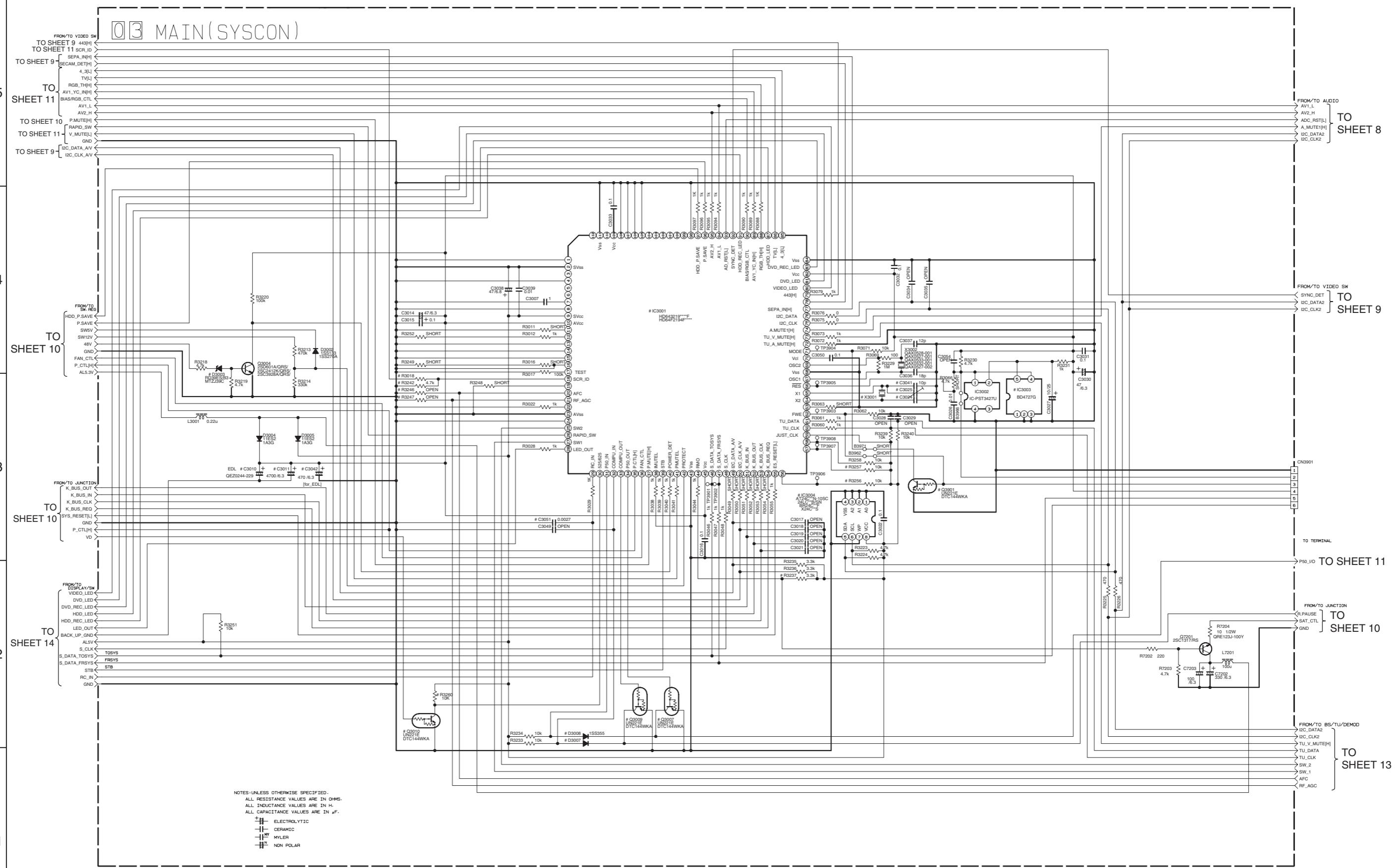
■ Audio/Video signal input control section



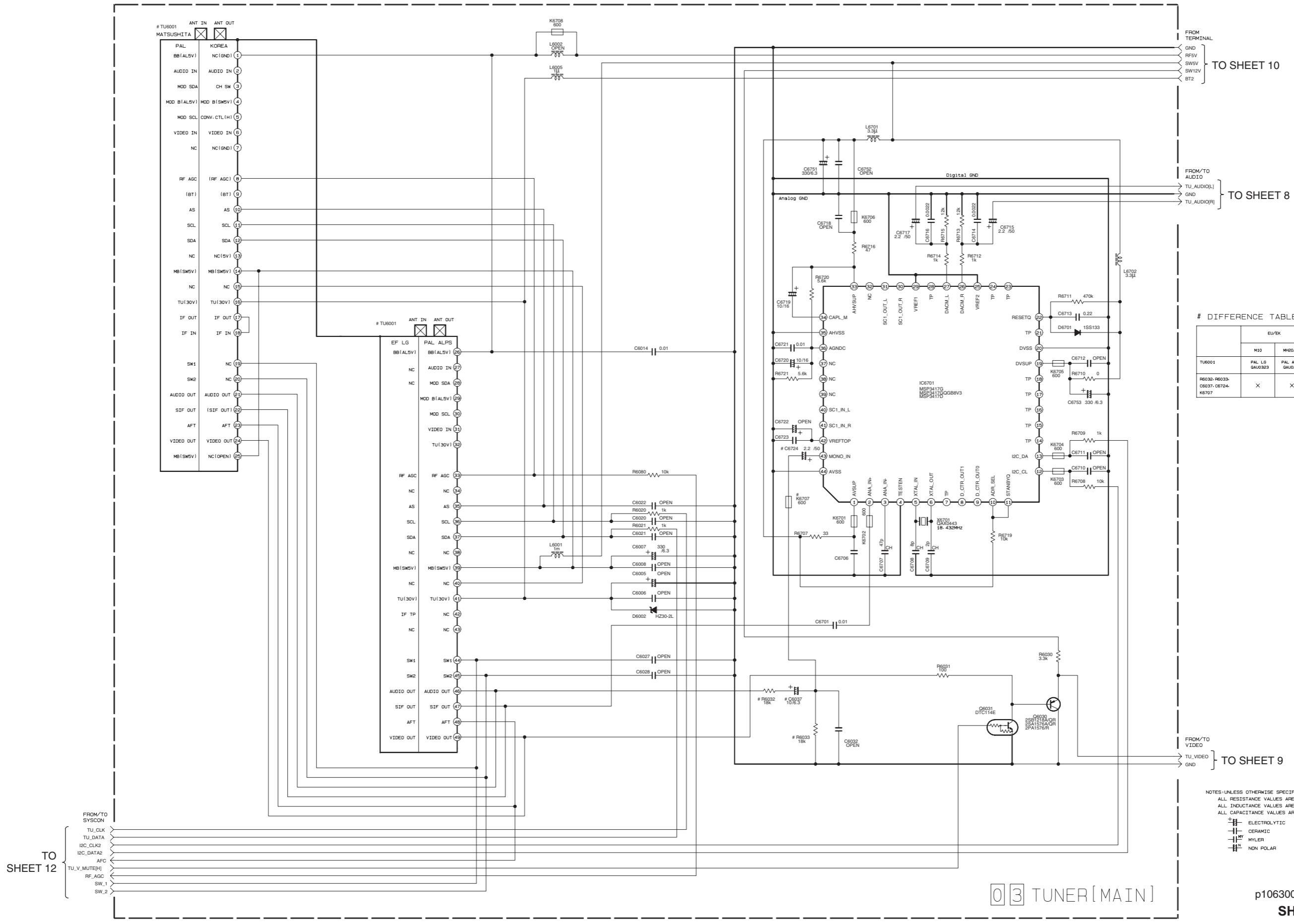
■ Input/Output terminal section



■ System controller section



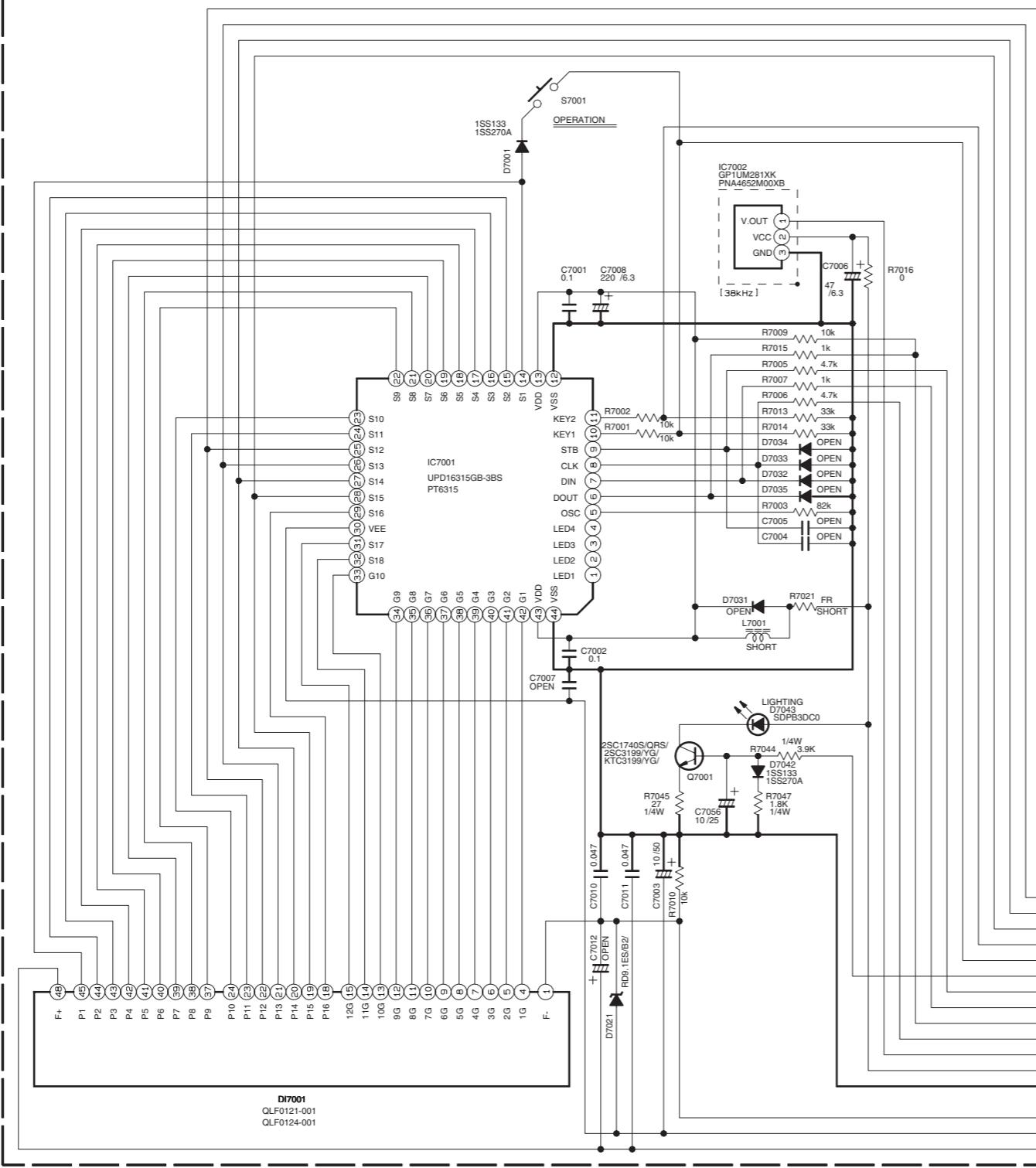
■ Tuner section



■ FL Display and operation switch section

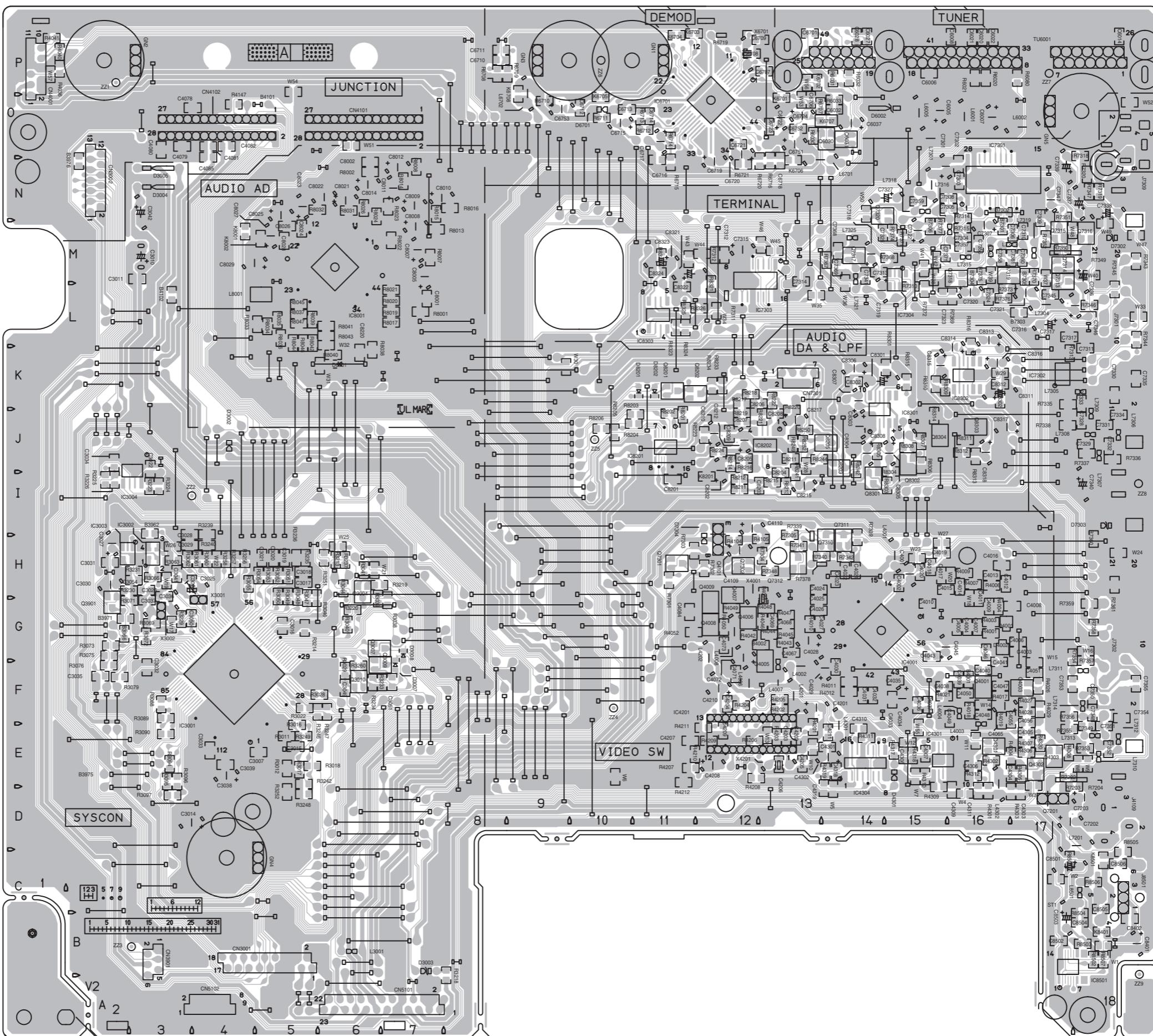
28 SW/DISPLAY

5



Printed circuit boards

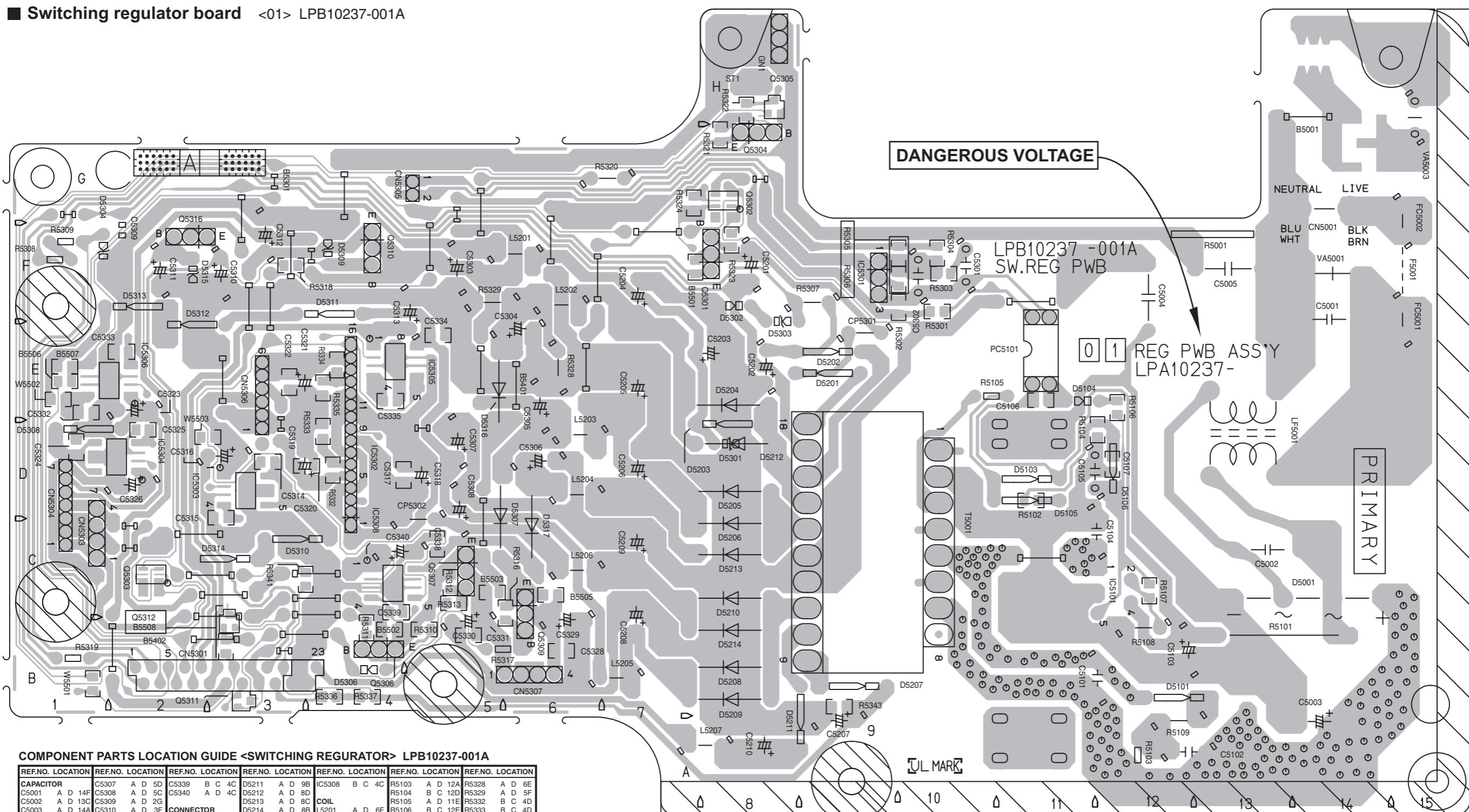
■ Main board <03> LPB10239-001C



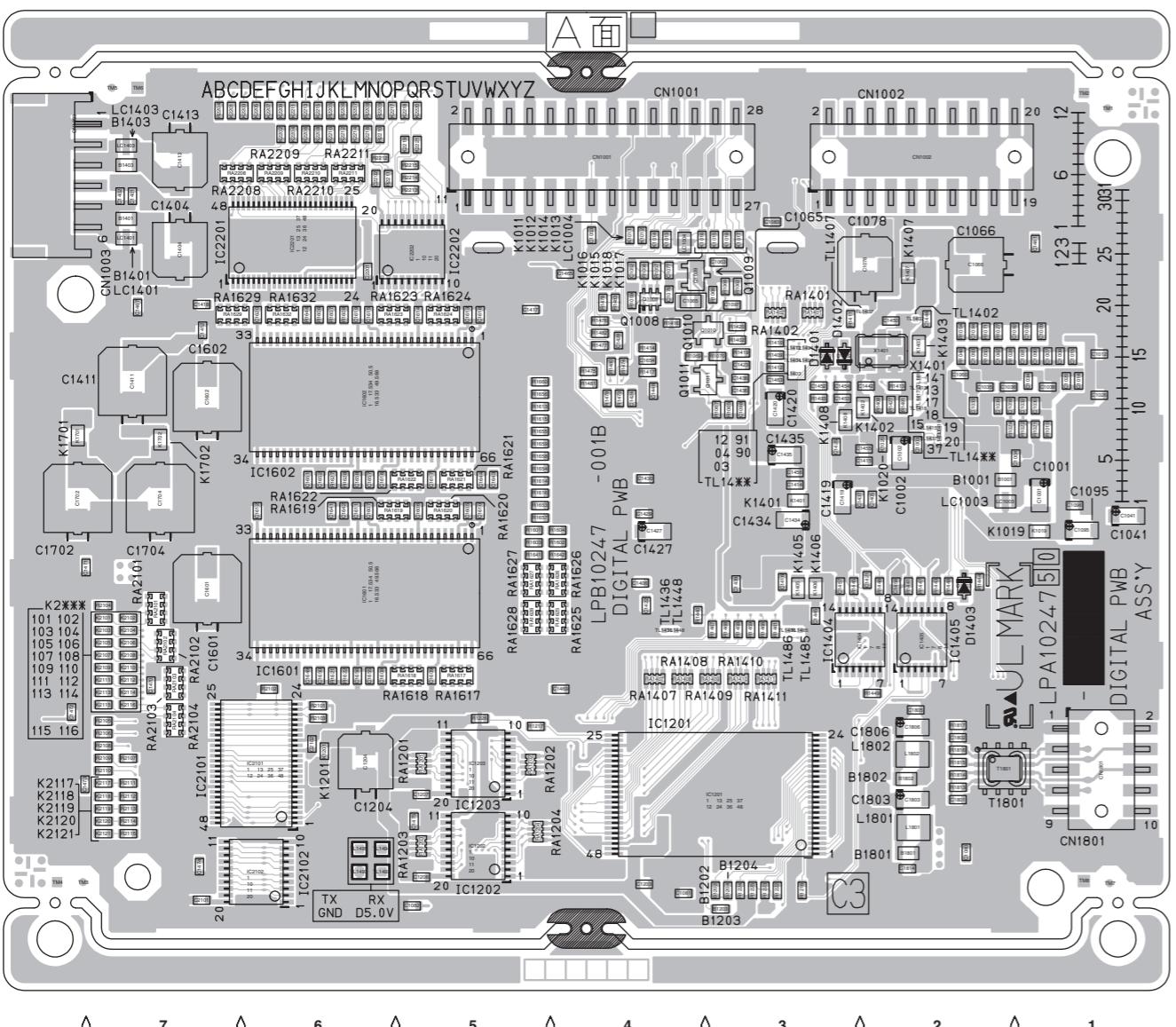
COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10239-001C

REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION
CAPACITOR	C4304 B C 17E	C8014 A D 6N	L4201 A D 13F	R3094 B C 3E	R7007 B C 10C
C3007 B C 5E	C4305 B C 17E	C8021 A D 6N	L4202 B C 12G	R3095 B C 3E	R7014 B C 10B
C3100 A D 3M	C4306 B C 16E	C8022 A D 6N	L4301 A D 14F	R3096 B C 3E	R7015 B C 10C
C3011 B C 3M	C4307 B C 15E	C8023 A D 5N	L4302 A D 16D	R3097 B C 3D	R7020 B C 17E
C3014 A D 4D	C4308 B C 15E	C8024 B C 5M	L6001 A D 16O	R3213 B C 6H	R7203 B C 18E
C3015 B C 5E	C4309 B C 16D	C8025 A D 5M	L6002 A D 17O	R3214 B C 5G	R7204 A D 18E
C3016 B C 5G	C4310 B C 14E	C8026 B C 5M	L6005 A D 15O	R3218 B C 8B	R7301 B C 11H
C3017 B C 5H	C4311 B C 16D	C8027 A D 5M	L6701 A D 13N	R3219 B C 6H	R7302 B C 12H
C3018 B C 5H	C4318 B C 14E	C8028 B C 5M	L6702 A D 9P	R3220 B C 6G	R7303 B C 11H
C3019 B C 5H	C4319 B C 14D	C8029 A D 5M	L7201 A D 18D	R3223 B C 3I	R7304 B C 13H
C3020 B C 5H	C6005 A D 15O	C8201 B C 11I	L7301 A D 15N	R3224 B C 3I	R7305 B C 13I
C3021 B C 5H	C6006 B C 15P	C8202 A D 12I	L7302 A D 19C	R3225 B C 14H	R8307 B C 15J
C3022 B C 3J	C6007 A D 16O	C8203 B C 17L	L7304 A D 17L	R3226 B C 2I	R7310 B C 15L
C3024 B C 4H	C6008 B C 16P	C8204 B C 13I	L7305 A D 17K	R3229 B C 3G	R8309 B C 15K
C3025 A D 4H	C6014 B C 18P	C8205 B C 12J	L7306 A D 18J	R3230 B C 3H	R8310 B C 15K
C3026 B C 3H	C6020 B C 16P	C8206 B C 13K	L7307 A D 18J	R3231 B C 3H	R8311 B C 16J
C3027 A D 2H	C6021 B C 16P	C8207 B C 12J	L7308 A D 18J	R3233 B C 7F	R8314 B C 16J
C3028 B C 3I	C6022 B C 16P	C8208 B C 13L	L7309 A D 18J	R3234 B C 6F	R8315 B C 16J
C3029 B C 3H	C6027 B C 14P	C8209 B C 12L	L7310 A D 18E	R3235 B C 5H	R8314 B C 15J
C3030 A D 2H	C6028 B C 14P	C8210 A D 12L	L7311 A D 17F	R3236 B C 5H	R8315 B C 15K
C3031 B C 2H	C6032 B C 14O	C8211 B C 13J	L7312 A D 18E	R3237 B C 6H	R8316 B C 16K
C3032 B C 3F	C6037 A D 14O	C8212 A D 12L	L7313 A D 18E	R3239 B C 4I	R8321 B C 12L
C3033 B C 4E	C6701 B C 13P	C8215 A D 13I	L7314 A D 18F	R3240 B C 4H	R8322 B C 11M
C3034 B C 2J	C6706 B C 13O	C8217 A D 13L	L7315 A D 16M	R3242 B C 5E	R8323 B C 11L
C3035 B C 2F	C6707 B C 13P	C8220 B C 6K	L7316 A D 16M	R3246 B C 6F	R8324 B C 11L
C3036 B C 3H	C6708 B C 12P	C8301 A D 15K	L7317 A D 16M	R3247 B C 6F	R8325 B C 11L
C3037 B C 3G	C6709 B C 13P	C8302 B C 14K	L7318 A D 15N	R3248 B C 5D	R8326 B C 12L
C3038 A D 4E	C6710 B C 8P	C8303 A D 14J	L7319 A D 17M	R3249 B C 5E	R8501 B C 17C
C3039 B C 4E	C6711 B C 8P	C8304 A D 14J	L7320 A D 16M	R3251 B C 6H	R8502 B C 18B
C3041 B C 3H	C6712 B C 10O	C8305 A D 15J	L7321 A D 14L	R3252 B C 5D	R8503 B C 18B
C3042 A D 3N	C6713 B C 10O	C8306 A D 14K	L7325 A D 14M	R3256 B C 4H	R8504 B C 18B
C3049 B C 6F	C6714 B C 11O	C8307 A D 14K	L8001 B C 5L	R3257 B C 4H	R8505 B C 18C
C3050 B C 3G	C6715 A D 10O	C8308 A D 15J	L8501 A D 18C	R3258 B C 4H	R8506 B C 18C
C3051 B C 7F	C6716 B C 11N	C8311 A D 16K	R3260 B C 6F	R7347 B C 18N	R8507 B C 18B
C3054 B C 3H	C6717 B C 11O	C8312 B C 16K	R4001 A D 16L	TRANSISTOR	OTHER A D 17M
C4001 A D 15H	C6718 B C 13N	C8313 A D 16L	Q3004 B C 6H	R4003 B C 16G	R7349 A D 10P
C4002 B C 15H	C6719 B C 12N	C8314 A D 16K	Q3007 B C 6G	R4004 B C 16G	R7350 B C 10P
C4003 B C 17G	C6720 B C 12O	C8315 A D 15K	Q3009 B C 6F	R4006 B C 16H	R7351 B C 9P
C4004 B C 16G	C6721 B C 12O	C8316 A D 15K	Q3010 B C 6F	R4007 B C 16H	R7352 B C 9P
C4005 B C 16G	C6722 B C 13O	C8317 A D 17J	Q3901 B C 2G	R4009 B C 16H	R7353 B C 4C
C4006 B C 17G	C6723 B C 13O	C8318 A D 16J	Q4001 B C 16F	R4010 B C 13G	R7354 B C 18O
C4007 B C 16G	C6724 B C 13O	C8321 A D 17M	Q4003 B C 17F	R4011 B C 14F	R7355 B C 19D
C4008 B C 17G	C6751 B C 13O	C8322 B C 11L	Q4005 B C 13F	R4012 B C 14F	R7356 B C 18L
C4009 B C 16G	C6752 B C 13O	C8323 A D 11M	Q4006 B C 12G	R4017 B C 16F	R7357 B C 19O
C4010 B C 15G	C6753 B C 9O	C8324 B C 11M	Q4007 B C 12H	R4018 B C 16F	R7358 B C 19C
C4011 B C 16G	C7202 B C 17D	C8401 A D 19B	Q4008 B C 12G	R4019 B C 16F	R7359 B C 13O
C4012 B C 16H	C7203 B C 18D	C8402 B C 18B	Q4009 B C 12G	R4021 B C 15F	R7360 B C 13P
C4013 B C 16H	C7301 B C 15N	C8501 A D 18C	Q4010 B C 12L	R4026 B C 17F	R7361 B C 11P
C4014 B C 16H	C7302 B C 16N	C8502 B C 17B	Q4011 B C 16E	R4027 B C 17F	R7367 B C 11P
C4015 B C 15H	C7303 B C 16N	C8503 A D 17C	Q4012 B C 17E	R4028 B C 17F	R7368 B C 10O
C4016 B C 16H	C7304 B C 16M	C8504 B C 18B	Q4013 B C 17E	R4029 B C 17F	R7369 B C 13N
C4017 B C 15H	C7305 B C 16N	C8505 B C 18C	Q4014 B C 14O	R4036 B C 1P	R7370 B C 14O
C4018 B C 15H	C7306 B C 17M	C8506 B C 18C	Q4015 B C 14O	R4040 B C 1P	R7371 B C 15M
C4019 B C 15H	C7307 A D 16M	Q7001 A D 14C	R4041 B C 1P	R7372 B C 15L	R8001 B C 4M
C4020 B C 15H	C7308 B C 16N	CONNECTOR R7201 A D 17D	R4042 B C 12G	R7373 B C 16L	R8002 B C 5M
C4021 B C 14H	C7309 B C 17N	CN3001 A D 5B	Q7001 A D 11H	R7374 B C 13G	R8201 B C 12I
C4022 B C 14H	C7310 B C 17M	CN3002 A D 2N	Q7002 A D 12H	R7375 B C 13G	R8401 B C 18B
C4023 B C 14H	C7311 B C 18K	CN3091 A D 3B	Q7003 A D 12H	R7376 B C 13G	R8501 B C 18C
C4024 B C 13H	C7312 B C 12M	CN4001 A D 10	Q7004 A D 13H	R7377 B C 13G	R9054 B C 22O
C4025 B C 13G	C7313 B C 14M	CN4101 A D 7Q	Q7005 A D 13H	R7378 B C 13G	A D 14H PC0958 B C 1A
C4026 B C 13G	C7314 B C 13M	CN4102 A D 5Q	Q7013 A D 17M	R7379 B C 13G	R9001 B C 6G
C4027 B C 13G	C7315 B C 12M	CN5101 A D 7A	Q7014 A D 17M	R7380 B C 12G	B C 6N TP3902 B C 5G
C4028 A D 13G	C7316 B C 17L	CN5102 A D 3A	Q7015 A D 17M	R7381 B C 12G	B C 7M TP3903 B C 3I
C4029 A D 14F	C7317 B C 17L	CN7301 A D 13K	Q7016 A D 17M	R7382 B C 13H	B C 7M TP3904 B C 3G
C4030 B C 14F	C7318 B C 14M	Q7017 A D 17M	R7383 B C 11G	R7384 B C 11G	B C 7M TP3905 B C 3H
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C4032 B C 14F	C7320 B C 16L	D3002 A D 4J	Q7019 A D 17M	R7387 B C 12H	B C 7M TP3907 B C 4H
C4033 B C 15F	C7321 B C 17L	D3003 A D 7B	Q7020 A D 17M	R7388 B C 12H	B C 8N TP3908 B C 4H
C4034 A D 15F	C7322 B C 17M	D3004 A D 3N	Q7021 A D 17M	R7389 B C 11K	B C 7L TU6001 A D 19P
C4035 B C 15F	C7323 B C 15L	D3005 A D 3N	Q7022 A D 17M	R7390 B C 11K	B C 7L X3001 A D 4G
C4036 B C 15F	C7324 B C 16L	D3007 B C 7F	Q7023 A D 17M	R7391 B C 13E	B C 7L X3002 A D 3G
C4037 B C 15F	C7325 B C 14M	D3008 B C 7G	Q7024 A D 17M	R7392 B C 12F	B C 7L X4001 A D 13G
C4038 B C 15F	C7327 B C 15N	D4001 A D 15N	Q7025 A D 17M	R7393 B C 13F	B C 7M X4201 A D 13E
C4039 B C 16F	C7328 B C 18J	D4002 A D 16G	Q7026 A D 17M	R7394 B C 12E	B C 7N X6701 A D 12P
C4040 B C 16F	C7329 B C 18J	D4030 A D 15E	Q7027 A D 17M	R7395 B C 11E	B C 6N
C4041 B C 16F	C7330 B C 18C	D6002 A D 14O	Q7028 A D 17M	R7396 B C 12E	B C 6N
C4043 B C 15G	C7331 B C 18J	D6004 A D 10O	Q7029 A D 17M	R7397 B C 12E	B C 6N
C4045 A D 15G	C7332 B C 18J	D7021 A D 13A	Q7030 A D 17M	R7398 B C 12E	B C 5N
C4046 B C 16G	C7333 B C 18K	D7022 A D 18M	Q7031 A D 17M		

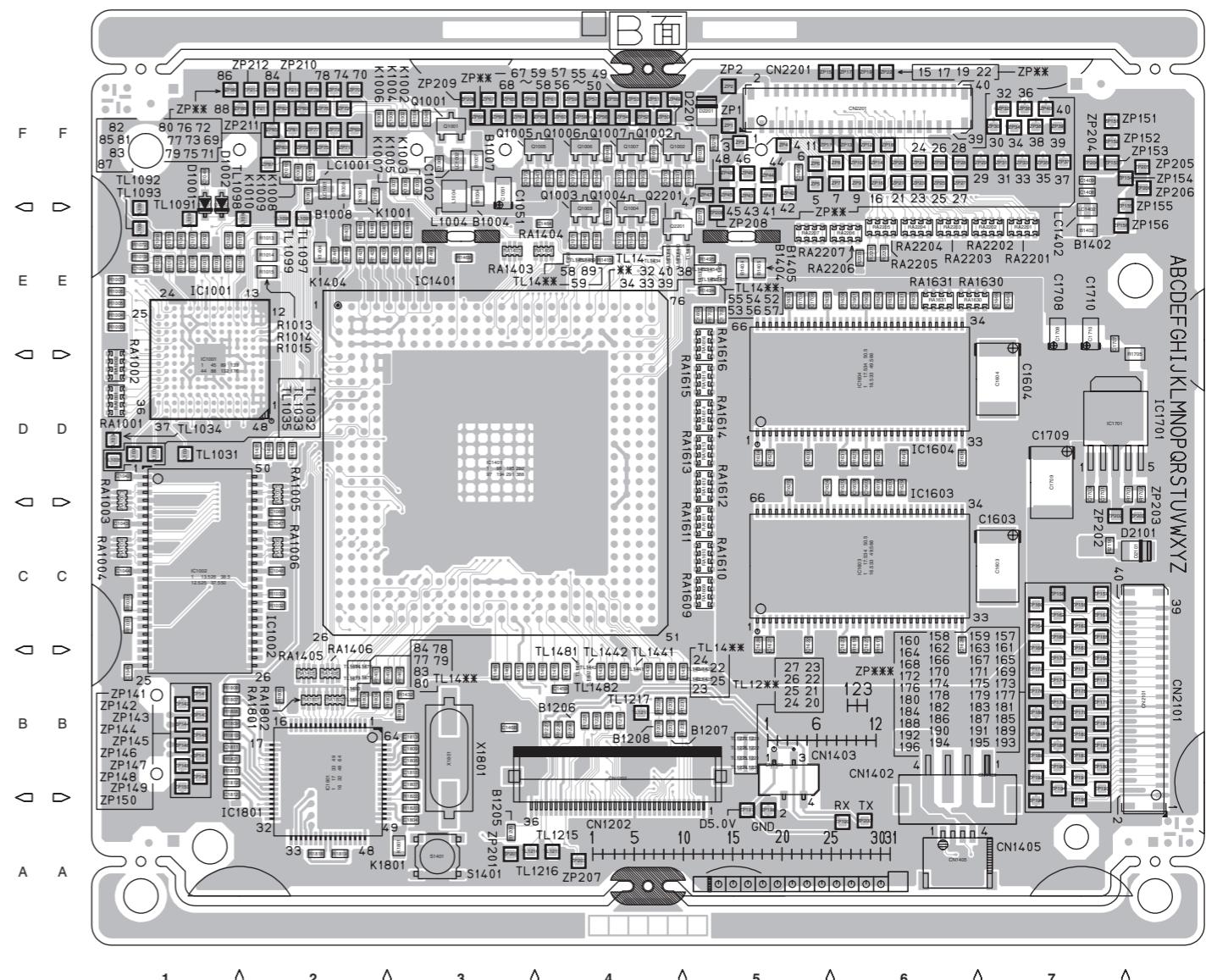
■ **Switching regulator board** <01> LPB10237-001A



Forward side



Reverse side



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C1009 A C 1E C1459 B C 4B D1401 A C 3E R1222 A C 3A R1630 B C 6D RA1628 A C 5C TL1097 B C 2E	C1010 A C 1E C1461 A C 1E D1402 A C 3E R1223 A C 3A R1631 B C 6E RA1629 A C 7E TL1098 B C 2E	C1011 A C 1D C1463 A C 3D D1403 A C 2C R1224 A C 3A R1632 B C 6E RA1630 B C 6E TL1099 B C 2E	C1015 A C 1E C1464 B C 4E D2101 B C 8C R1225 A C 3A R1641 A C 5C RA1631 B C 6E TL1215 B C 4A	C1017 B C 1E C1465 A C 4E D2201 B C 5F R1227 B C 4B R1643 B C 6D RA1632 A C 6E TL1216 B C 3A	C1018 B C 1E C1466 B C 5F D1467 A C 7E IC R1228 B C 4B R1644 A C 6E RA1632 B C 2B TL1217 B C 4B	C1019 B C 1E C1467 A C 7E IC R1228 B C 4B R1644 A C 6E RA1632 B C 2B TL1220 B C 5B
C1020 A C 1D C1468 B C 3B IC1001 B C 1D R1229 B C 4B R1653 A C 5D RA2101 A C 7C TL1221 B C 5B	C1022 B C 1E C1469 A C 4B IC1002 B C 1C R1230 B C 5B R1654 A C 5D RA2102 A C 7C TL1222 B C 5B	C1023 B C 1E C1470 A C 7B IC1201 A C 3B R1231 B C 5B R1655 A C 5D RA2103 A C 7B TL1223 B C 5B	C1026 A C 1D C1471 A C 8C IC1202 A C 5A R1401 B C 2E R1656 A C 5D RA2104 A C 7B TL1224 B C 5B	C1030 A C 1D C1472 A C 8B IC1203 A C 5B R1402 A C 3E R1657 A C 5D RA2201 B C 7E TL1225 B C 5B	C1032 A C 1D C1473 A C 88 IC1401 B C 3D R1408 A C 2D R1658 A C 5D RA2202 B C 7E TL1226 B C 5B	C1033 A C 1D C1474 A C 7A IC1404 A C 3C R1409 A C 3E R1659 A C 5D RA2203 B C 6E TL1227 B C 5B
C1034 A C 1D C1475 A C 5B IC1405 A C 2C R1410 A C 3E R1660 A C 5D RA2204 B C 6E TL1402 A C 2E	C1035 A C 1D C1476 A C 7C IC1601 A C 6C R1411 A C 3E R1701 B C 8D RA2205 B C 6E TL1403 A C 3D	C1036 A C 2D C1602 A C 7D IC1602 A C 6D R1412 A C 3E R1702 B C 8D RA2206 B C 6E TL1404 A C 3E	C1038 A C 1D C1603 B C 7C IC1603 A C 6C R1413 A C 2D R1703 B C 5E RA2207 B C 5E TL1407 A C 2E	C1039 A C 2D C1604 B C 7D IC1604 A C 6D R1414 A C 4E R1704 B C 5E RA2208 A C 7F TL1412 A C 3E	C1041 A C 1D C1605 A C 5D IC1701 B C 7D R1415 B C 4E R1705 B C 8E RA2209 A C 6F TL1413 A C 2D	C1042 B C 1D C1606 A C 5D IC1801 B C 2B R1416 A C 4E R1801 B C 3B RA2210 A C 6F TL1414 A C 2D
C1043 B C 1C C1607 A C 6C IC2101 A C 6B R1417 A C 4D R1802 B C 3B RA2211 A C 6F TL1415 A C 2D	C1044 B C 1C C1608 A C 6C IC2102 A C 6A R1418 A C 3E R1803 B C 2B TL1417 A C 2D	C1045 B C 1B C1609 A C 5C IC2201 A C 6E R1420 A C 3E R1804 B C 2B OTHER TL1418 A C 2D	C1046 B C 2C C1610 A C 5D IC2202 A C 5E R1421 B C 2E R1805 B C 1B RA1001 B C 2F TL1419 A C 2D	C1047 B C 2C C1611 A C 6D R1422 B C 2E R1806 B C 1B RA1002 B C 3F TL1420 A C 2D	C1048 B C 3F C1612 A C 6D COIL R1423 B C 2E R1807 B C 1B RA1003 A C 2D TL1422 B C 5B	C1049 B C 1F C1613 A C 5E L1004 B C 3F R1424 B C 3E R1808 B C 1B RA1004 A C 4E TL1423 B C 5B
C1050 B C 1E C1614 A C 5E L1801 A C 2B R1425 B C 3E R1809 B C 1B RA1005 A C 4E TL1424 B C 5B	C1051 B C 3F C1615 A C 6E L1802 A C 2B R1426 B C 3E R1810 B C 1B RA1006 A C 4E TL1425 B C 5B	C1052 A C 4E C1616 A C 6D R1427 A C 2D R1811 B C 1B RA1007 A C 7F TL1432 B C 4E	C1053 A C 4E C1617 A C 5D TRANSISTOR R1428 B C 2D R1812 B C 1B RA1008 A C 2F TL1433 B C 4E	C1058 A C 2D C1618 A C 5E Q1001 B C 3F R1429 B C 2D R1813 A C 2B RA1002 B C 3F TL1434 B C 4E	C1060 A C 2D C1619 A C 6E Q1002 B C 4F R1430 B C 2D R1814 A C 2B RA1003 B C 3F TL1436 A C 4C	C1062 A C 2E C1620 A C 6E Q1003 B C 4E R1431 B C 2D R1815 A C 2B RA1004 B C 3F TL1437 A C 2D
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C1203 A C 4A C1656 A C 6C R1022 A C 1D R1469 B C 3E R2207 A C 6F R1022 A C 7C TL1494 A C 6A	C1204 A C 6B C1657 A C 6D R1024 A C 2D R1470 B C 4B R2208 A C 6F R1023 A C 7C TL1495 A C 6A	C1206 A C 5A C1658 A C 6D R1027 A C 2E R1471 B C 3B R2209 A C 6F R1024 A C 7C TM1 A C 1F	C1207 A C 5B C1659 B C 6D R1028 A C 2E R1472 B C 4B R2210 A C 6F R1025 A C 7C TM2 A C 1F	C1208 B C 4B C1660 B C 6D R1029 B C 2E R1473 A C 4D R2211 A C 6F R1026 A C 7C TM3 A C 8A	C1401 A C 7F C1661 B C 6E R1030 B C 1C R1474 A C 4E R2212 A C 6F R1027 A C 7C TM4 A C 8A	C1402 A C 7F C1662 B C 6E R1031 B C 1C R1475 A C 4E R2213 A C 5F R1028 A C 7C TM5 A C 7F
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PARTS LIST

[DR-MH20SE, DR-MH20SEF, DR-MH20SEK,
DR-MH30SE, DR-MH30SEF, DR-MH30SEK,
DR-MH30SER]

* SAFETY PRECAUTION

Parts identified by the Δ symbol are critical for safety. Replace only with specified part numbers.

* BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

* (x_) in a description column shows the number of the used part.

Area Suffix

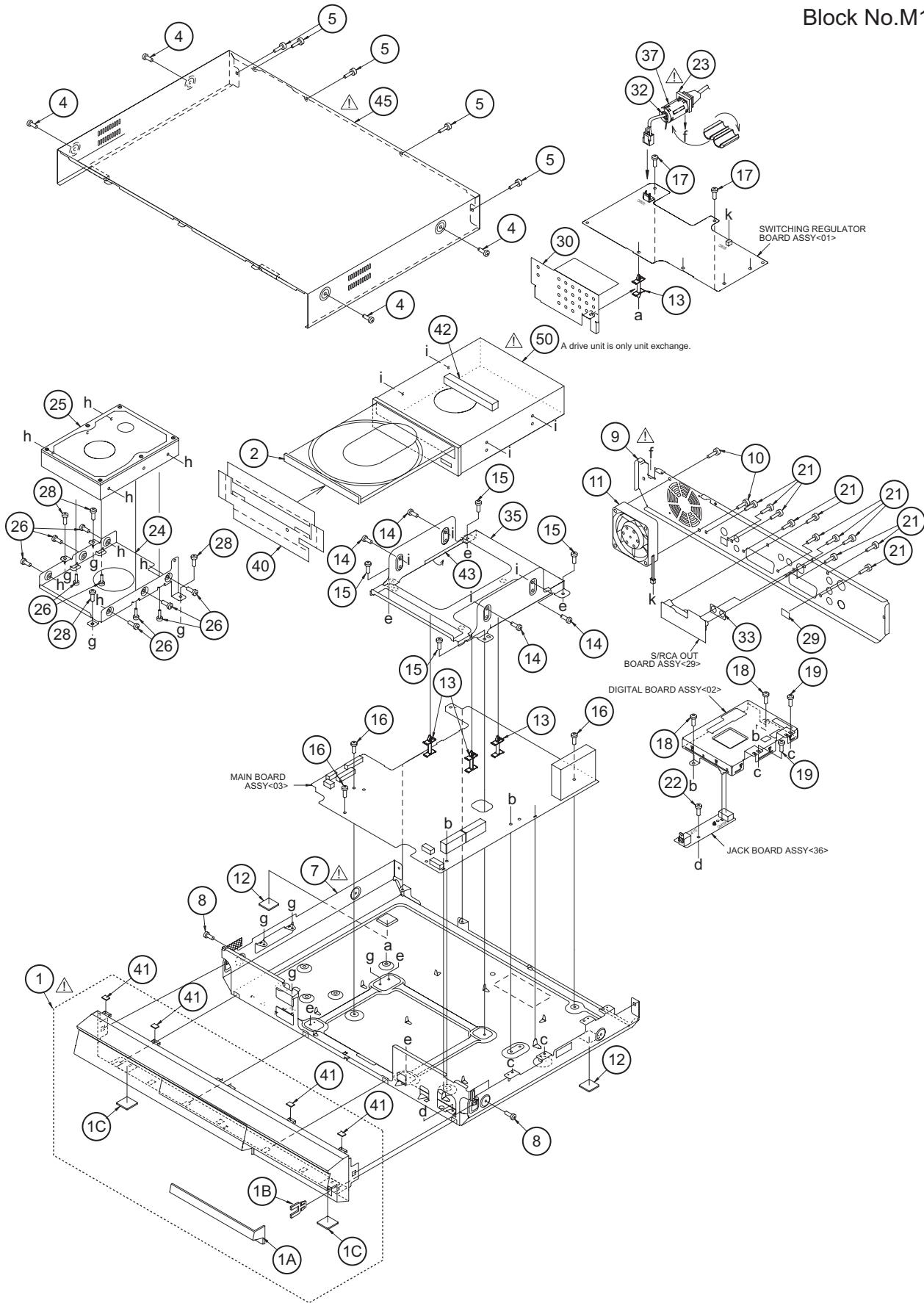
EK -----	U.K.
EF -----	France
ER ---	Russian Federation
E -----	Continental Europe Northern Europe

- Contents -

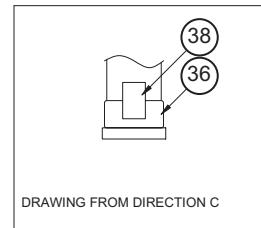
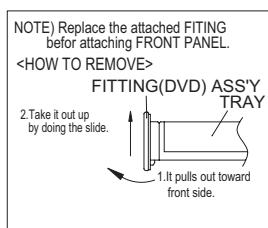
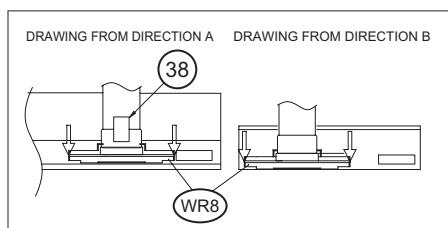
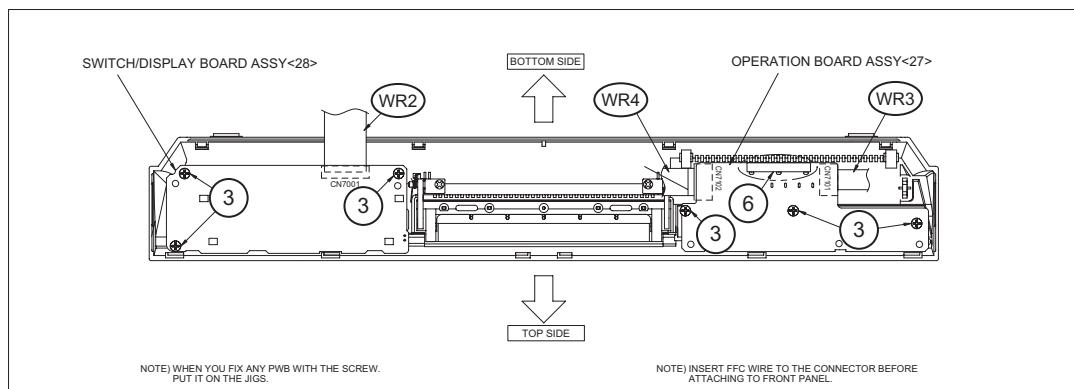
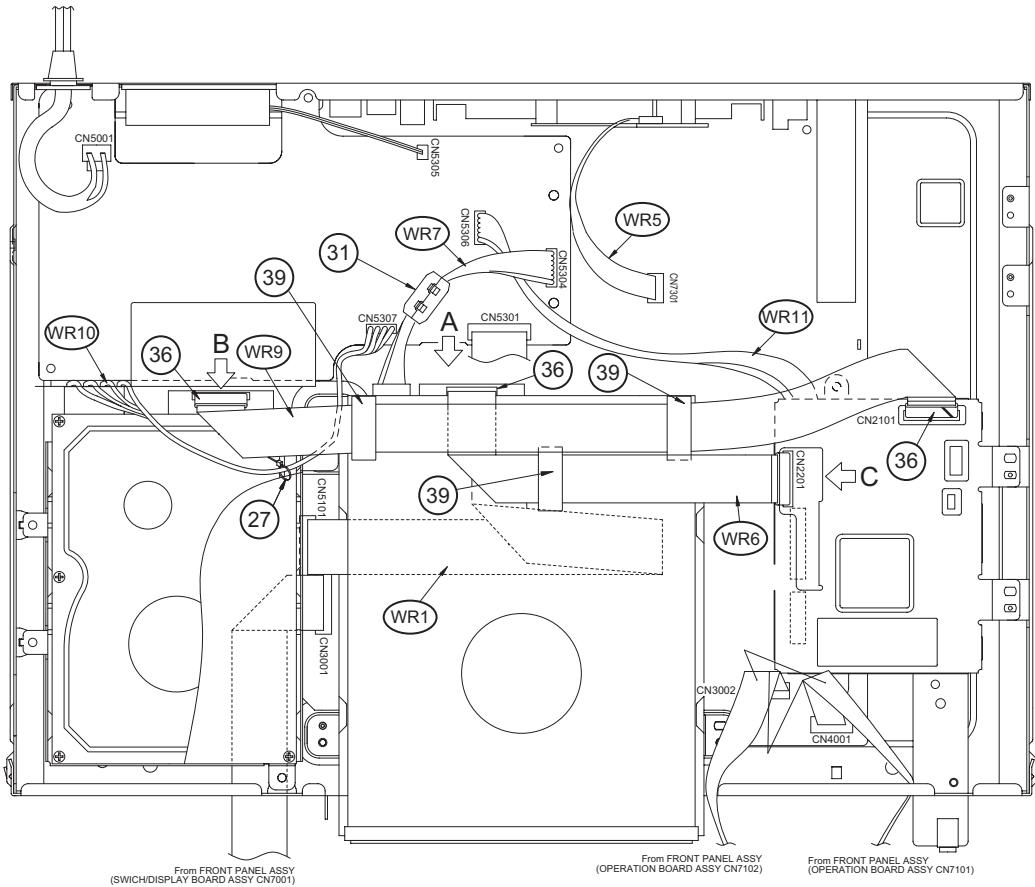
Exploded view of general assembly and parts list	3-2
Electrical parts list	3-5
Packing materials and accessories parts list	3-17

Exploded view of general assembly and parts list

Block No.M1MM



Block No.M1MM



General assembly

Block No. [M][1][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
△ 1	LP10533-211B	FRONT PANEL ASSY		20E,20EF
△ 1	LP10533-212B	FRONT PANEL ASSY		20EK
△ 1	LP10533-210C	FRONT PANEL ASSY		30EK
△ 1	LP10533-209C	FRONT PANEL ASSY		30E,30EF,30ER
1A	LP21252-201A	DOOR		
1B	PU60109	CATCHER		
1C	LP31382-201A	FOOT	(x2)	
2	LP31372-005A	FITTING(DVD) ASSY		
3	QYTDTSF2608ZA	TAP SCREW	M2.6 x 8mm FRONT BOARD(x6)	
4	QYSBSG3006NA	TAP SCREW	M3 x 6mm TOP SIDE(x4)	
5	QYSBSG3006NA	TAP SCREW	M3 x 6mm TOP REAR(x5)	
6	LP41175-001A	SPACER		
△ 7	LP10564-001A	BOTTOM CHASSIS		
8	QYSDSG3008NA	TAP SCREW	M3 x 8mm BOTTOM CHASSIS(x2)	20E,20EF,30E,30EF
△ 9	LP21321-006A	REAR PANEL		20EK,30EK
△ 9	LP21321-007A	REAR PANEL		30ER
△ 9	LP21321-008A	REAR PANEL		
10	QYSDSF3008MA	TAP SCREW	M3 x 8mm FAN(x2)	
11	QAR0326-001	FAN MOTOR		
12	LP31348-002A	FOOT	REAR(x2)	
13	PEME0946-08	SPACER	(x4)	
14	QYTDST3006ZA	TAP SCREW	M3 x 6mm DVD UNIT(x4)	
15	QYSDSGY3006ZA	TAP SCREW	M3 x 6mm DVD BRACKET(x4)	
16	QYSPSGG3006ZA	TAP SCREW	M3 x 6mm MAIN(x3)	
17	QYSPSGG3006ZA	TAP SCREW	M3 x 6mm REGULATOR(x2)	
18	QYSBSGG3008EA	TAP SCREW	M3 x 8mm DIGITAL(x2)	
19	QYSBSGG3008EA	TAP SCREW	M3 x 8mm DIGITAL(x2)	
21	QYSBSGY3008MA	TAP SCREW	M3 x 8mm REAR JACK(x11)	
22	QYSPSGG3006ZA	TAP SCREW	M3 x 6mm JACK BOARD	
△ 23	QMP51K0-170-K	POWER CORD	1.7m BLACK	20EK,30EK
△ 23	QMP4A10-170-K	POWER CORD	1.7m BLACK	20E,20EF,30E,30EF,30ER
24	LP21280-202A	BRACKET(HDD)		
25	LPH40267-006A	HDD	(SERVICE)	20EF
25	LPH40267-005A	HDD	(SERVICE)	20E,20EK
25	LPH40267-003A	HDD	(SERVICE)	30EF
25	LPH40267-002A	HDD	(SERVICE)	30E,30EK,30ER
26	LP40738-001B	SCREW	HDD(x10)	
27	PU43192-4	BINDER		
28	QYSDSGY3006ZA	TAP SCREW	M3 x 6mm HDD BRACKET(x4)	
29	LP41107-002A	GASKET		
30	LP31442-001A	PROTECT COVER		
31	QQR0917-002	CORE FILTER		
32	PU43192-4	BINDER		
33	LP41165-002A	GASKET		
35	LP21156-003A	BRACKET(DVD DRIVE)		
36	QQR1439-003	FERRITE CORE	(x4)	
37	QQR0491-001	FERRITE CORE		
38	LP30002-0F6A	SPACER	(x2)	
39	LP30002-A09A	SPACER	(x3)	
40	LP31417-001A	SHIELD PLATE		
41	LP30002-0G2A	SPACER	(x4)	
42	LP41107-001A	GASKET		
43	LP30002-0H5A	SPACER		
△ 45	LP21256-006A	METAL COVER	BRACKET(DVD)	
△ 50	QAL0551-001	DRIVE UNIT	(SERVICE)	30EF
△ 50	QAL0551-002	DRIVE UNIT		20E,20EF,20EK,30E,30EK,30ER
WR 1	QUQ112-1926CJ	FFC WIRE	REGULATOR CN5301-MAIN CN5101	
WR 2	QUQ112-1818CJ	FFC WIRE	SWICH DISPLAY CN7001-MAIN CN3001	
WR 3	QUQ112-1312CG	FFC WIRE	OPERATION CN7101-MAIN CN3002	
WR 4	QUQ112-1112CG	FFC WIRE	OPERATION CN7102-MAIN CN4001	
WR 5	QUQ112-0714CG	FFC WIRE	S/RCA OUT CN7312-MAIN CN7301	
WR 6	QUQ605-4022AH	FFC WIRE	DIGITAL CN2201-DVD UNIT	
WR 7	QJJ032-041214	SIN CR C-C WIRE	REGULATOR CN5303-DVD UNIT	
WR 8	QGZ0018A1-40	CONNECTOR	HDD & DVD UNIT(x2)	
WR 9	QUQ605-4038AH	FFC WIRE	HDD-DIGITAL CN2101	
WR10	QJJ032-042204	SIN CR C-C WIRE	HDD-REGULATOR CNCN5307	
WR11	QJJ015-062211	SIN CR C-C WIRE	REGULATOR CN5306-DIGITAL CN1401	

Electrical parts list

Switching regulator board

Block No. [0][1]

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10237-04C	REGULATOR BOARD ASSY			D5205	RK34-LFB2	SB DIODE		
IC5101	STR-G6653-F9	IC			D5206	RK34-LFB2	SB DIODE		
IC5301	TL431/A-T	IC			D5207	AU01Z-T2	FR DIODE		
IC5301	or MM1431AT-T	IC			D5207	or ERA18-02-T2	FR DIODE		
IC5301	or UTCTL431-T	IC			D5207	or 1SR153-400-T2	FR DIODE		
IC5301	or L5431-T	IC			D5207	or 10ERB20-T2	FR DIODE		
IC5302	MPD5S017	IC(HYBRID)			D5207	or 1F4G-T2	FR DIODE		
IC5303	MM1563DF-X	IC			D5208	RK14LF-B2	SB DIODE		
IC5305	MM1565AF-X	IC			D5210	RK34-LFB2	SB DIODE		
IC5308	MM1665AH-X	IC			D5212	RL2Z-LFB2	FR DIODE		
Q5301	2SD2144S/UV-T	TRANSISTOR			D5213	RK34-LFB2	SB DIODE		
Q5301	or 2SC3576-JVC-T	TRANSISTOR			D5214	RK34-LFB2	SB DIODE		
Q5302	UMD12N-W	DIGI TRANSISTOR			D5301	MTZJ15A-T2	Z DIODE		
Q5302	or XP4313-W	DIGI TRANSISTOR			D5301	or RD15ES/B1-T2	Z DIODE		
Q5303	UMD12N-W	DIGI TRANSISTOR			D5302	1SS133-T2	DIODE		
Q5303	or XP4313-W	DIGI TRANSISTOR			D5302	or 1SS270A-T2	SI DIODE		
Q5304	2SA1585S/QR-T	TRANSISTOR			D5303	MTZJ27C-T2	Z DIODE		
Q5305	DTC114EKA-X	TRANSISTOR			D5303	or RD27ES/B3-T2	Z DIODE		
Q5305	or UN2211-X	TRANSISTOR			D5304	MTZJ12B-T2	Z DIODE		
Q5305	or RT1N141C-X	DIGI TRANSISTOR			D5304	or RD12ES/B3-T2	Z DIODE		
Q5306	2SA1585S/QR-T	TRANSISTOR			D5306	1SS133-T2	DIODE		
Q5307	2SA1585S/QR-T	TRANSISTOR			D5306	or 1SS270A-T2	SI DIODE		
Q5309	2SA1585S/QR-T	TRANSISTOR			D5307	RL2Z-LFB2	FR DIODE		
Q5310	2SD1858/QR-T	TRANSISTOR			D5309	RD5.6ES/B3-T2	Z DIODE		
Q5311	DTC114EUA-X	DIGI TRANSISTOR			D5309	or MTZJ5.6C-T2	Z DIODE		
Q5311	or UN5211-X	DIGI TRANSISTOR			D5310	1A3G-T2	SI DIODE		
Q5311	or RN1302-X	DIGI TRANSISTOR			D5310	or 10EDB20-T2	SI DIODE		
Q5311	or PDTC114EU-X	DIGI TRANSISTOR			D5310	or ERA15-02-T2	SI DIODE		
Q5311	or RT1N141M-X	DIGI TRANSISTOR			D5314	1S4-T2	SB DIODE		
Q5312	DTC114EUA-X	DIGI TRANSISTOR			D5314	or AW04-T2	SB DIODE		
Q5312	UN5211-X	DIGI TRANSISTOR			D5314	or SBO40-T2	SB DIODE		
Q5312	or RN1302-X	DIGI TRANSISTOR			D5315	RD12ES/B1-T2	Z DIODE		
Q5312	or PDTC114EU-X	DIGI TRANSISTOR			D5315	or MTZJ12A-T2	Z DIODE		
Q5312	or RT1N141M-X	DIGI TRANSISTOR			D5317	RK14LF-B2	SB DIODE		
Q5316	2SD2144S/UV-T	TRANSISTOR			D5317	or 2IDQ04-F	SB DIODE		
Q5316	or 2SC3576-JVC-T	TRANSISTOR			D5317	or SB240-F26	SB DIODE		
D5001	D3SBA60	DIODE			△ PC5101	PC123Y22FZ	PHOTO COUPLER		
D5001	or GBJ4J	BRIDGE DIODE			△ C5001	QFZ9077-683	MPP CAPACITOR	0.068uF 275V M	
D5101	SARS01-T2	SI DIODE			△ C5002	QFZ9077-223	MPP CAPACITOR	0.022uF 275V M	
D5103	AU01Z-T2	FR DIODE			C5003	QEZ0374-107	E CAPACITOR	100uF 400V M	
D5103	or ERA18-04-T2	FR DIODE			△ C5004	QCZ9079-222	C CAPACITOR	2200pF AC250V M	
D5103	or 1SR153-400-T2	FR DIODE			C5101	QCZ0339-101Z	C CAPACITOR	100pF 1kV K	
D5103	or 10ERB20-T2	FR DIODE			C5102	QCZ0349-472Z	C CAPACITOR	4700pF 1kV K	
D5103	or 1F4G-T2	FR DIODE			C5103	QEMU1VM-276Z	E CAPACITOR	27uF 35V M	
D5104	1SS133-T2	DIODE			C5104	QCZ0136-471Z	C CAPACITOR	470pF 1kV K	
D5104	or 1SS270A-T2	SI DIODE			C5105	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
D5105	AU01Z-T2	FR DIODE			C5106	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
D5105	or ERA18-04-T2	FR DIODE			C5107	NCB31HK-221X	C CAPACITOR	220pF 50V K	
D5105	or 1SR153-400-T2	FR DIODE			C5201	QEMXQJM-227Z	E CAPACITOR	220uF 6.3V M	
D5105	or 10ERB40-T2	FR DIODE			C5202	QEMU1HM-186Z	E CAPACITOR	18uF 50V M	
D5105	or 10ERB40-T2	FR DIODE			C5203	QEMT1CM-687	E CAPACITOR	680uF 16V M	
D5106	or 1F4G-T2	FR DIODE			C5204	QEMT1CM-128	E CAPACITOR	1200uF 16V M	
D5106	AU01Z-T2	FR DIODE			C5205	QEMT1AM-158	E CAPACITOR	1500uF 10V M	
D5106	or ERA18-04-T2	FR DIODE			C5206	QEMT1AM-128	E CAPACITOR	1200uF 10V M	
D5106	or 1SR153-400-T2	FR DIODE			C5207	QETN2AM-475Z	E CAPACITOR	4.7uF 100V M	
D5106	or 10ERB20-T2	FR DIODE			C5208	QEMT1AM-108	E CAPACITOR	1000uF 10V M	
D5106	or 1F4G-T2	FR DIODE			C5209	QEMT1AM-158	E CAPACITOR	1500uF 10V M	
D5106	QFVF1HJ-154Z	MF CAPACITOR			C5301	QFVF1HJ-154Z	MF CAPACITOR	0.15uF 50V J	
D5106	or 1F4G-T2	FR DIODE			C5302	QFLC1HJ-333Z	M CAPACITOR	0.033uF 50V J	
D5201	10ERB20-T2	FR DIODE			C5303	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
D5201	or ERA18-02-T2	FR DIODE			C5304	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
D5202	AU01Z-T2	FR DIODE			C5305	QETN1AM-107Z	E CAPACITOR	100uF 10V M	
D5202	or ERA18-04-T2	FR DIODE			C5306	QETN1AM-107Z	E CAPACITOR	100uF 10V M	
D5202	or 1SR153-400-T2	FR DIODE			C5307	QETN1AM-107Z	E CAPACITOR	100uF 10V M	
D5202	or 10ERB20-T2	FR DIODE			C5308	QETN1AM-107Z	E CAPACITOR	100uF 10V M	
D5202	or 1F4G-T2	FR DIODE			C5309	QCBB1HK-103Y	C CAPACITOR	0.01uF 50V K	
D5203	AU01Z-T2	FR DIODE			C5310	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
D5203	or ERA18-02-T2	FR DIODE			C5311	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M	
D5203	or 1SR153-400-T2	FR DIODE			C5312	QETN1AM-107Z	E CAPACITOR	100uF 10V M	
D5203	or 10ERB20-T2	FR DIODE			C5313	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
D5203	or 1F4G-T2	FR DIODE			C5314	NCB21AK-105X	C CAPACITOR	1uF 10V K	
D5204	RL2Z-LFB2	FR DIODE			C5315	NCB31HK-471X	C CAPACITOR	470pF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local
C5316	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
C5317	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C5318	QECS1CM-477	E CAPACITOR	470uF 16V M	
C5319	QECS1CM-477	E CAPACITOR	470uF 16V M	
C5321	QECS1CM-477	E CAPACITOR	470uF 16V M	
C5322	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C5328	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	
C5329	QETN1CM-106Z	E CAPACITOR	10uF 16V M	
C5330	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	
C5331	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
C5334	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C5335	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C5338	NCB21AK-105X	C CAPACITOR	1uF 10V K	
C5339	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C5340	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
C5341	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C5342	NCB31HK-102X	C CAPACITOR	1000pF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local
HS1	PEME0889-01-01	HEAT SINK		
△ LF5001	QQR1031-001	LINE FILTER		
ST1	PU59391	STYLE PIN		
W5501	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W5502	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W5503	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
OT1	QYTDST3008ZA	TAP SCREW	M3 x 8mm	

Digital board

Block No. [0][2]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10247-03E	DIGITAL BOARD ASSY		
IC1001	JCP8059	IC		
IC1002	HY57V161610ET-8	IC		
IC1002	or K4S161622H-TC80	IC		
IC1002	or M12L16161A-7TG	IC		
IC1002	or HY57V161610ETP7	IC		
IC1002	or MT48LC1M16TG-7S	IC		
IC1201	LPN0877-001A	IC(FLASH)	(SERVICE)	
IC1202	SN74LVC373APW-X	IC(DIGITAL)		
IC1203	SN74LVC373APW-X	IC(DIGITAL)		
IC1401	DMN8652-B0	IC(DIGITAL)		
IC1404	SN74HCT08APW-X	IC		
IC1405	SN74LV08APW-X	IC		
IC1601	HY5DU561622CT-J	IC		
IC1601	or HYB25D256160CE6	IC		
IC1602	HY5DU561622CT-J	IC		
IC1602	or HYB25D256160CE6	IC		
IC1603	HY5DU561622CT-J	IC		
IC1603	or HYB25D256160CE6	IC		
IC1604	HY5DU561622CT-J	IC		
IC1604	or HYB25D256160CE6	IC		
IC1701	PQ015YZ01Z-X	IC		
IC1801	TSB41AB2PAP	IC		
Q1002	2SA1037AK/QR/-X	TRANSISTOR		
Q1002	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1002	or 2SB709A/QR/-X	TRANSISTOR		
Q1003	2SA1037AK/QR/-X	TRANSISTOR		
Q1003	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1003	or 2SB709A/QR/-X	TRANSISTOR		
Q1004	2SA1037AK/QR/-X	TRANSISTOR		
Q1004	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1004	or 2SB709A/QR/-X	TRANSISTOR		
Q1005	2SA1037AK/QR/-X	TRANSISTOR		
Q1005	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1005	or 2SB709A/QR/-X	TRANSISTOR		
Q1006	2SA1037AK/QR/-X	TRANSISTOR		
Q1006	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1006	or 2SB709A/QR/-X	TRANSISTOR		
Q1007	2SA1037AK/QR/-X	TRANSISTOR		
Q1007	or 2SA1530A/QR/-X	SI TRANSISTOR		
Q1007	or 2SB709A/QR/-X	TRANSISTOR		
Q1008	UMZ1N-W	PAIR TRANSISTOR		
Q1008	or BC847PN-X	PAIR TRANSISTOR		
Q1008	or BC846PN-X	PAIR TRANSISTOR		
Q1009	2SC2412K/QRS/-X	TRANSISTOR		
Q1009	or 2SC3928A/QRS/-X	TRANSISTOR		
Q1009	or 2SD601A/QRS/-X	TRANSISTOR		
Q1010	2SC2412K/QRS/-X	TRANSISTOR		
Q1010	or 2SC3928A/QRS/-X	TRANSISTOR		
Q1010	or 2SD601A/QRS/-X	TRANSISTOR		
Q1011	2SC2412K/QRS/-X	TRANSISTOR		
Q1011	or 2SC3928A/QRS/-X	TRANSISTOR		
Q1011	or 2SD601A/QRS/-X	TRANSISTOR		
D1001	1SS355-X	SI DIODE		
D1001	or MA111-X	SI DIODE		
D1002	1SS355-X	SI DIODE		
D1002	or MA111-X	SI DIODE		
D1401	1SS355-X	SI DIODE		

△ Symbol No.	Part No.	Part Name	Description	Local
B5508	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
△ CN5001	QGA7901C3-02	CONNECTOR	W-B (1-2)	
CN5301	QGF1207C1-19	CONNECTOR	FFC/FPC (1-19)	
CN5303	QGA2501C1-04	CONNECTOR	W-B (1-4)	
CN5305	QGA2001C1-02	CONNECTOR	W-B (1-2)	
CN5306	QGA2001C1-06	CONNECTOR	W-B (1-6)	
CN5307	QGA2501C1-04	CONNECTOR	W-B (1-4)	
△ CP5301	QMFZ050-1R5X-E	FUSE	1.5A 125V	
△ CP5302	QMFZ050-2R0X-E	FUSE	2A 125V	
△ F5001	QMF51E2-2R0-J1	FUSE	2A AC250V	
FC5001	QNG0020-001Z	FUSE CLIP		
FC5002	QNG0020-001Z	FUSE CLIP		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1656	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1068	NRSA63D-222X	MG RESISTOR	2.2kΩ 1/16W D	
C1658	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1069	NRSA63D-222X	MG RESISTOR	2.2kΩ 1/16W D	
C1660	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1070	NRSA63D-122X	MG RESISTOR	1.2kΩ 1/16W D	
C1662	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1071	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D	
C1701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1072	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C1702	NEHMOJM-107X	E CAPACITOR	100uF 6.3V M		R1217	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1703	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1218	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1704	NEHMOJM-107X	E CAPACITOR	100uF 6.3V M		R1219	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1706	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1220	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1707	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1221	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1708	NBE20JM-476X	TA E CAPACITOR	47uF 6.3V M		R1222	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C1710	NBE20JM-476X	TA E CAPACITOR	47uF 6.3V M		R1225	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1801	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R1226	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C1802	NDC31HJ-271X	C CAPACITOR	270pF 50V J		R1229	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C1803	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R1230	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C1804	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1231	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C1805	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1401	NRSA63F-1181X	MG RESISTOR	1.18kΩ 1/16W F	
C1806	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R1402	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C1807	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1408	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C1808	NDC31HJ-120X	C CAPACITOR	12pF 50V J		R1409	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1809	NDC31HJ-120X	C CAPACITOR	12pF 50V J		R1410	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1811	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1411	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1812	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1412	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1001	NRSA63D-221X	MG RESISTOR	220Ω 1/16W D		R1413	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1002	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1414	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1003	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1415	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1004	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1416	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1005	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1417	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1006	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1419	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1007	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1420	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1009	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1427	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1012	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1428	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1013	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		R1429	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1014	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		R1430	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1015	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		R1431	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1017	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1434	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1018	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1435	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1019	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1436	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1021	NRSA63D-332X	MG RESISTOR	3.3kΩ 1/16W D		R1437	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R1022	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D		R1438	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1024	NRSA63D-272X	MG RESISTOR	2.7kΩ 1/16W D		R1439	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1027	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R1440	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1028	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R1441	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R1029	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1443	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R1030	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1444	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R1031	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1445	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1032	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1446	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1033	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R1447	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1035	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1448	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1036	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1449	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1037	NRSA63D-101X	MG RESISTOR	100Ω 1/16W D		R1450	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1038	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1451	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1039	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1452	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1040	NRSA63D-101X	MG RESISTOR	100Ω 1/16W D		R1453	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1041	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1458	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1042	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1459	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1043	NRSA63D-151X	MG RESISTOR	150Ω 1/16W D		R1460	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1044	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1461	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1045	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1462	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1046	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R1465	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1047	NRSA63D-201X	MG RESISTOR	200Ω 1/16W D		R1466	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1048	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1467	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1049	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1468	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1050	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1469	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1051	NRSA63D-271X	MG RESISTOR	270Ω 1/16W D		R1470	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R1052	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1471	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1053	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1472	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R1054	NRSA63D-332X	MG RESISTOR	3.3kΩ 1/16W D		R1473	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1055	NRSA63D-181X	MG RESISTOR	180Ω 1/16W D		R1474	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1056	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R1475	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1057	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J		R1476	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1059	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R1477	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1060	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R1478	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1061	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R1479	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R1065	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J		R1480	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R1066	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1481	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R1067	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J		R1482	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
					R1483	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local
B1001	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
B1007	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
B1008	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
B1202	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
B1405	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
B1802	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
CN1001	QGB2027L5-28X	CONNECTOR	B-B (1-28)	
CN1002	QGB2027L5-20X	CONNECTOR	B-B (1-20)	
CN1003	QGA2001F2-06V	CONNECTOR	W-B (1-6)	
CN1402	QGA2001C2-04V	CONNECTOR	W-B (1-4)	
CN1403	QGF1016C2-04W	CONNECTOR	FFC/FPC (1-4)	
CN1801	QGB2027L1-10X	CONNECTOR	B-B (1-10)	
CN2101	QGF0539C1-40W	CONNECTOR	FFC/FPC (1-40)	
CN2201	QGF0539C1-40W	CONNECTOR	FFC/FPC (1-40)	
K1001	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1002	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1003	NQR0129-002X	FERRITE BEADS		
K1004	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1005	NQR0129-002X	FERRITE BEADS		
K1006	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1007	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1008	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1009	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1010	NQR0129-002X	FERRITE BEADS		
K1011	NQR0129-002X	FERRITE BEADS		
K1012	NQR0129-002X	FERRITE BEADS		
K1013	NQR0129-002X	FERRITE BEADS		
K1014	NQR0129-002X	FERRITE BEADS		
K1015	NQR0129-002X	FERRITE BEADS		
K1016	NQR0129-002X	FERRITE BEADS		
K1017	NQR0129-002X	FERRITE BEADS		
K1018	NQR0129-002X	FERRITE BEADS		
K1019	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1020	NQR0129-002X	FERRITE BEADS		
K1021	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1022	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1023	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1201	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
K1401	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1402	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1403	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1404	NQR0339-001X	FERRITE BEADS		
K1406	NQR0339-001X	FERRITE BEADS		
K1407	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1408	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1701	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1702	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K1801	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K2101	NQR0129-002X	FERRITE BEADS		
K2102	NQR0129-002X	FERRITE BEADS		
K2103	NQR0129-002X	FERRITE BEADS		
K2104	NQR0129-002X	FERRITE BEADS		
K2105	NQR0129-002X	FERRITE BEADS		
K2106	NQR0129-002X	FERRITE BEADS		
K2107	NQR0129-002X	FERRITE BEADS		
K2108	NQR0129-002X	FERRITE BEADS		
K2109	NQR0129-002X	FERRITE BEADS		
K2110	NQR0129-002X	FERRITE BEADS		
K2111	NQR0129-002X	FERRITE BEADS		
K2112	NQR0129-002X	FERRITE BEADS		
K2113	NQR0129-002X	FERRITE BEADS		
K2114	NQR0129-002X	FERRITE BEADS		
K2115	NQR0129-002X	FERRITE BEADS		
K2116	NQR0129-002X	FERRITE BEADS		
K2117	NQR0129-002X	FERRITE BEADS		
K2118	NQR0129-002X	FERRITE BEADS		
K2119	NQR0129-002X	FERRITE BEADS		
K2120	NQR0129-002X	FERRITE BEADS		
K2121	NQR0129-002X	FERRITE BEADS		
K2201	NQR0129-002X	FERRITE BEADS		
K2202	NQR0129-002X	FERRITE BEADS		
K2203	NQR0129-002X	FERRITE BEADS		
K2204	NQR0129-002X	FERRITE BEADS		
K2205	NQR0129-002X	FERRITE BEADS		
K2206	NQR0129-002X	FERRITE BEADS		
K2207	NQR0129-002X	FERRITE BEADS		
K2208	NQR0129-002X	FERRITE BEADS		

△ Symbol No.	Part No.	Part Name	Description	Local
K2209	NQR0129-002X	FERRITE BEADS		
K2210	NQR0129-002X	FERRITE BEADS		
K2211	NQR0129-002X	FERRITE BEADS		
K2212	NQR0129-002X	FERRITE BEADS		
K2213	NQR0129-002X	FERRITE BEADS		
K2214	NQR0129-002X	FERRITE BEADS		
K2215	NQR0129-002X	FERRITE BEADS		
K2216	NQR0129-002X	FERRITE BEADS		
K2217	NQR0129-002X	FERRITE BEADS		
K2218	NQR0129-002X	FERRITE BEADS		
K2219	NQR0129-002X	FERRITE BEADS		
K2220	NQR0129-002X	FERRITE BEADS		
K2221	NQR0129-002X	FERRITE BEADS		
LC1401	NQR0512-008X	EMI FILTER		
LC1402	NQR0512-008X	EMI FILTER		
LC1403	NQR0512-008X	EMI FILTER		
SD1	LP21279-001A	SHIELD CASE		
X1401	NAX0580-001X	CXO	27.0000MHz	
X1801	NAX0551-001X	CRYSTAL	24.576MHz	
OT1	LC41656-001A	COOLING SHEET		

Main board

Block No. [0][3]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10239-04F1	MAIN BOARD ASSY		20EF,30EF
PW1	LPA10239-05E1	MAIN BOARD ASSY		20EK,30EK
PW1	LPA10239-06E1	MAIN BOARD ASSY		20E,30E,30ER
IC3001	HD6432194SXE01F	IC(MCU)	MASK	
IC3002	IC-PST3427U-X	IC		
IC3004	LPN0876-003B-33	IC(EEPROM)	(*REFER TO BELOW) 20EF,30EF	
IC3004	LPN0876-001B-32	IC(EEPROM)	(*REFER TO BELOW) 20EK,30EK	
IC3004	LPN0876-002B-31	IC(EEPROM)	(*REFER TO BELOW) 20E,30E,30ER	
IC4001	JCP8038-I	IC		
IC4001	or JCP8038	IC		
IC4201	LC74793	IC		
IC4301	LA7357M-W	IC		20EF,30EF
IC4304	74HC4538D-X	IC		20EF,30EF
IC6701	MSP3417GQCB8V3X	IC		
IC6701	or MSP3417G-X	IC		
IC7301	MM1623XF-X	IC		
IC7302	MM1508XN-X	IC		
IC7303	TC74HC4053AF-X	IC		
IC7303	or CD74HC4053NS-X	IC		
IC7304	MM1501XN-X	IC		
IC8001	AK5365VQ	IC		
IC8201	AK4385VT-X	IC		
IC8201	or AK4381VT-X	IC		
IC8202	BA15218F-XE	IC		
IC8301	LA7151M-X	IC		
IC8302	LA7151M-X	IC		
IC8303	BA15218F-XE	IC		
IC8501	SN74LV08APW-X	IC		
Q3004	2SC2412K/QRS-X	TRANSISTOR		
Q3004	or 2SD601A/QRS-X	TRANSISTOR		
Q3004	or 2SC3928A/QRS-X	TRANSISTOR		
Q3007	UN221E-X	TRANSTSTOR		
Q3007	or DTC144WKA-X	DIGI TRANSISTOR		
Q3007	or RT1N44HC-X	DIGI TRANSISTOR		
Q3009	UN221E-X	TRANSTSTOR		
Q3009	or DTC144WKA-X	DIGI TRANSISTOR		
Q3009	or RT1N44HC-X	DIGI TRANSISTOR		
Q310	UN221E-X	TRANSTSTOR		
Q310	or DTC144WKA-X	DIGI TRANSISTOR		
Q310	or RT1N44HC-X	DIGI TRANSISTOR		
Q4001	2SB709A/QR-X	TRANSISTOR		
Q4001	or 2SA1037AK/QR-X	TRANSISTOR		
Q4001	or 2SA1530A/QR-X	SI TRANSISTOR		
Q4003	2SD601A/QRS-X	TRANSISTOR		
Q4003	or 2SC2412K/QRS-X	TRANSISTOR		
Q4003	or 2SC3928A/QRS-X	TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
Q4006	2SC2412K/QRS/-X	TRANSISTOR			D3003	or MTZJ39C-T2	Z DIODE		
Q4006	or 2SC3928A/QRS/-X	TRANSISTOR			D3004	10EDB20-T2	SI DIODE		
Q4101	2SD2144S/UV/-T	TRANSISTOR			D3004	or 1A3G-T2	SI DIODE		
Q4101	or 2SC3576-JVC-T	TRANSISTOR			D3005	10EDB20-T2	SI DIODE		
Q4301	2SD601A/QRS/-X	TRANSISTOR		20EF,30EF	D3005	or 1A3G-T2	SI DIODE		
Q4301	or 2SC2412K/QRS/-X	TRANSISTOR		20EF,30EF	D3007	1SS355-X	SI DIODE		
Q4301	or 2SC3928A/QRS/-X	TRANSISTOR		20EF,30EF	D3007	or MA111-X	SI DIODE		
Q4302	2SB709A/QR/-X	TRANSISTOR		20EF,30EF	D3008	1SS355-X	SI DIODE		
Q4302	or 2SA1037AK/QR/-X	TRANSISTOR		20EF,30EF	D3008	or MA111-X	SI DIODE		
Q4302	or 2SA1530A/QR/-X	TRANSISTOR		20EF,30EF	D4001	DA204U-X	SI DIODE		
Q4303	2SB709A/QR/-X	TRANSISTOR		20EF,30EF	D4002	DA204U-X	SI DIODE		
Q4303	or 2SA1037AK/QR/-X	TRANSISTOR		20EF,30EF	D4301	1SS133-T2	DIODE		
Q4303	or 2SA1530A/QR/-X	TRANSISTOR		20EF,30EF	D6002	HZ30-2L-T2	Z DIODE		
Q6030	2SA1037AK/QR/-X	TRANSISTOR			D6002	or HZ30-2LTD	Z DIODE		
Q6030	or 2SB709A/QR/-X	TRANSISTOR			D6701	1SS133-T2	DIODE		
Q6030	or 2SA1530A/QR/-X	SI TRANSISTOR			D6701	or 1SS270A-T2	SI DIODE		
Q6031	UN2211-X	TRANSISTOR			D7304	1SS133-T2	DIODE		
Q6031	or DTC114EKA-X	TRANSISTOR			D8001	1SS355-X	SI DIODE		
Q6031	or RT1N141C-X	DIGI TRANSISTOR			D8001	or MA111-X	SI DIODE		
Q7201	2SC1317/RS/-T	TRANSISTOR			D8202	1SS355-X	SI DIODE		
Q7301	2SD601A/QRS/-X	TRANSISTOR			C3007	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
Q7301	or 2SC2412K/QRS/-X	TRANSISTOR			C3010	QEZ0244-229	EDL CAPACITOR	0.022F 5.5V Z	
Q7302	2SD601A/QRS/-X	TRANSISTOR			C3014	QEKJ0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q7302	or 2SC2412K/QRS/-X	TRANSISTOR			C3015	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7302	or 2SC3928A/QRS/-X	TRANSISTOR			C3016	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7310	2SB709A/QR/-X	TRANSISTOR			C3022	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7310	or 2SA1037AK/QR/-X	TRANSISTOR			C3024	NDC31HJ-120X	C CAPACITOR	12pF 50V J	20EF,20EK,30EF,30EK
Q7310	or 2SA1530A/QR/-X	SI TRANSISTOR			C3024	NDC31HJ-220X	C CAPACITOR	22pF 50V J	20E,30E,30ER
Q7311	2SB709A/QR/-X	TRANSISTOR			C3025	QAT3725-300Z	TRIM CAPACITOR	30pF TIMER CLOCK	20E,30E,30ER
Q7311	or 2SA1037AK/QR/-X	TRANSISTOR			C3027	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
Q7311	or 2SA1530A/QR/-X	SI TRANSISTOR			C3030	QEKJ0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q7312	UN221E-X	TRANSTSTOR			C3031	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7312	or DTC144WKA-X	DIGI TRANSISTOR			C3032	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7312	or RT1N44HC-X	DIGI TRANSISTOR			C3033	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7313	UN221E-X	TRANSTSTOR			C3036	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
Q7313	or DTC144WKA-X	DIGI TRANSISTOR			C3037	NDC31HJ-120X	C CAPACITOR	12pF 50V J	
Q7313	or RT1N44HC-X	DIGI TRANSISTOR			C3038	QEKJ0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q7314	UN221E-X	TRANSTSTOR			C3039	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q7314	or DTC144WKA-X	DIGI TRANSISTOR			C3041	NDC31HJ-180X	C CAPACITOR	18pF 50V J	20EF,20EK,30EF,30EK
Q7314	or RT1N44HC-X	DIGI TRANSISTOR			C3042	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
Q7315	DTC114TKA-X	TRANSISTOR			C3050	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7315	or RT1N140C-X	DIGI TRANSISTOR			C3051	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
Q7315	or UN2215-X	TRANSISTOR			C3054	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q7316	2SB709A/QR/-X	TRANSISTOR			C4001	QEKJ0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q7316	or 2SA1037AK/QR/-X	TRANSISTOR			C4002	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
Q7316	or 2SA1530A/QR/-X	SI TRANSISTOR			C4003	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
Q7317	2SB709A/QR/-X	TRANSISTOR			C4005	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q7317	or 2SA1037AK/QR/-X	TRANSISTOR			C4006	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q7317	or 2SA1530A/QR/-X	SI TRANSISTOR			C4008	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
Q8201	UN221E-X	TRANSTSTOR			C4010	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8201	or DTC144WKA-X	DIGI TRANSISTOR			C4012	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8201	or RT1N44HC-X	DIGI TRANSISTOR			C4013	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
Q8202	UN211E-X	DIGI TRANSISTOR			C4015	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8202	or DTA144WKA-X	TRANSISTOR			C4016	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8202	or RT1P44HC-X	DIGI TRANSISTOR			C4018	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
Q8203	2SC2412K/QRS/-X	TRANSISTOR			C4019	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
Q8203	or 2SD601A/QRS/-X	TRANSISTOR			C4021	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8203	or 2SC3928A/QRS/-X	TRANSISTOR			C4022	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8205	2SC2412K/QRS/-X	TRANSISTOR			C4023	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8205	or 2SD601A/QRS/-X	TRANSISTOR			C4024	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8205	or 2SC3928A/QRS/-X	TRANSISTOR			C4025	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8301	2SC2412K/QRS/-X	TRANSISTOR			C4026	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8301	or 2SD601A/QRS/-X	TRANSISTOR			C4027	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8301	or 2SC3928A/QRS/-X	TRANSISTOR			C4028	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
Q8302	2SC2412K/QRS/-X	TRANSISTOR			C4029	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q8302	or 2SD601A/QRS/-X	TRANSISTOR			C4030	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8302	or 2SC3928A/QRS/-X	TRANSISTOR			C4033	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8303	2SC2412K/QRS/-X	TRANSISTOR			C4034	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
Q8303	or 2SD601A/QRS/-X	TRANSISTOR			C4035	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8303	or 2SC3928A/QRS/-X	TRANSISTOR			C4036	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8304	2SC2412K/QRS/-X	TRANSISTOR			C4037	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8304	or 2SD601A/QRS/-X	TRANSISTOR			C4039	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
Q8304	or 2SC3928A/QRS/-X	TRANSISTOR			C4040	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
D3002	1SS133-T2	DIODE			C4041	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
D3002	or 1SS270A-T2	SI DIODE			C4043	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
D3003	RD39ES/B3/-T2	Z DIODE			C4045	QEKJ1HM-225Z	E CAPACITOR	2.2uF 50V M	
D3003					C4046	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C4047	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C7336	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
C4049	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		C7337	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
C4055	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C7338	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
C4056	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C7339	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
C4065	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M		C7340	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
C4067	NDC31HJ-151X	C CAPACITOR	150pF 50V J		C7345	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C4068	NCB31HK-102X	C CAPACITOR	1000pF 50V K		C7346	QEJK1CM-107Z	E CAPACITOR	100uF 16V M	
C4069	NDC31HJ-821X	C CAPACITOR	820pF 50V J		C7347	QEJK1CM-476Z	E CAPACITOR	47uF 16V M	
C4071	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C7350	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4072	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		C7351	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C4081	NCB31HK-102X	C CAPACITOR	1000pF 50V K		C7354	NDC31HJ-681X	C CAPACITOR	680pF 50V J	
C4109	QERF1CM-476Z	E CAPACITOR	47uF 16V M		C7355	NDC31HJ-681X	C CAPACITOR	680pF 50V J	
C4110	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M		C7368	NDC31HJ-120X	C CAPACITOR	12pF 50V J	
C4201	QERF1AM-227Z	E CAPACITOR	220uF 10V M		C7369	NDC31HJ-6R0X	C CAPACITOR	6pF 50V J	
C4202	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C7371	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C4203	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8001	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C4204	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8002	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C4207	NCB31CK-563X	C CAPACITOR	0.056uF 16V K		C8005	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4208	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M		C8007	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C4209	NCB31AK-224X	C CAPACITOR	0.22uF 10V K		C8008	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4210	QERF1AM-227Z	E CAPACITOR	220uF 10V M		C8009	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4211	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C8010	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4301	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8011	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4302	QERF1CM-476Z	E CAPACITOR	47uF 16V M		C8012	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C4304	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8014	QEJK1HM-105Z	E CAPACITOR	1uF 50V M	
C4305	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8021	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C4306	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8022	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C4307	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8023	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M	
C4308	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8024	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4309	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	20EF,30EF	C8025	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C4310	NDC31HJ-471X	C CAPACITOR	470pF 50V J	20EF,30EF	C8026	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4318	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	20EF,30EF	C8027	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M	
C4319	NDC31HJ-471X	C CAPACITOR	470pF 50V J	20EF,30EF	C8028	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6006	NCB21HK-103X	C CAPACITOR	0.01uF 50V K	20E,20E,30E,30ER	C8201	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6007	QEJK0JM-337Z	E CAPACITOR	330uF 6.3V M		C8202	QETJ0JM-477Z	E CAPACITOR	470uF 6.3V M	
C6014	NCB21HK-103X	C CAPACITOR	0.01uF 50V K		C8203	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C6037	QEJK1EM-106Z	E CAPACITOR	10uF 25V M	20EF,30EF	C8204	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C6701	NCB21HK-102X	C CAPACITOR	1000pF 50V K		C8205	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C6707	NDC21HJ-470X	C CAPACITOR	47pF 50V J		C8206	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C6708	NDC21HJ-8R0X	C CAPACITOR	8pF 50V J		C8207	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C6709	NDC21HJ-8R0X	C CAPACITOR	8pF 50V J		C8208	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C6713	NCF21CZ-224X	C CAPACITOR	0.22uF 16V Z		C8209	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6714	NCB21HK-222X	C CAPACITOR	2200pF 50V K		C8210	QETJ1CM-227Z	E CAPACITOR	220uF 16V M	
C6715	QEJK1HM-225Z	E CAPACITOR	2.2uF 50V M		C8211	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6716	NCB21HK-222X	C CAPACITOR	2200pF 50V K		C8212	QETJ1CM-227Z	E CAPACITOR	220uF 16V M	
C6717	QEJK1HM-225Z	E CAPACITOR	2.2uF 50V M		C8215	QETJ1EM-476Z	E CAPACITOR	47uF 25V M	
C6719	QEJK1CM-106Z	E CAPACITOR	10uF 16V M		C8217	QETJ1EM-476Z	E CAPACITOR	47uF 25V M	
C6720	QEJK1CM-106Z	E CAPACITOR	10uF 16V M		C8220	NCF31EZ-104X	C CAPACITOR	0.1uF 25V Z	
C6721	NCB21HK-103X	C CAPACITOR	0.01uF 50V K		C8301	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
C6723	NCB21HK-103X	C CAPACITOR	0.01uF 50V K		C8302	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6724	QEJK1HM-225Z	E CAPACITOR	2.2uF 50V M	20EF,30EF	C8303	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C6753	QEJK0JM-337Z	E CAPACITOR	330uF 6.3V M		C8304	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7202	QEJK0JM-227Z	E CAPACITOR	220uF 6.3V M		C8305	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7203	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M		C8306	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7301	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M		C8307	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7302	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C8308	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7303	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C8311	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
C7304	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C8312	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7305	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8313	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7306	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8314	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7307	QEJK0JM-226Z	E CAPACITOR	22uF 6.3V M		C8315	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7308	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8316	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7309	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8317	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7310	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C8318	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7311	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C8321	QETN1CM-227Z	E CAPACITOR	220uF 16V M	
C7312	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C8322	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7313	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C8323	QETN1CM-227Z	E CAPACITOR	220uF 16V M	
C7314	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C8324	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7315	QEJK1CM-476Z	E CAPACITOR	47uF 16V M		C8401	QEJK0JM-107Z	E CAPACITOR	100uF 6.3V M	
C7316	QEKC1HM-475Z	E CAPACITOR	4.7uF 50V M		C8402	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7317	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C8501	QEKC1CM-107Z	E CAPACITOR	100uF 16V M	
C7318	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M		C8502	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7319	QEJK1HM-475Z	E CAPACITOR	4.7uF 50V M		C8503	QEKC1HM-475Z	E CAPACITOR	4.7uF 50V M	
C7327	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M		C8504	NDC31HJ-151X	C CAPACITOR	150pF 50V J	
C7330	NCB31HK-102X	C CAPACITOR	1000pF 50V K		C8505	NDC31HJ-331X	C CAPACITOR	330pF 50V J	
C7331	NCB31HK-102X	C CAPACITOR	1000pF 50V K		C8506	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7334	NDC31HJ-681X	C CAPACITOR	680pF 50V J						
C7335	NDC31HJ-681X	C CAPACITOR	680pF 50V J						
					R3011	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R3012	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4017	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3016	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4018	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R3017	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R4021	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R3018	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R4026	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R3022	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4027	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R3028	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4028	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R3029	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4029	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R3038	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4044	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R3039	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4045	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R3040	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4046	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R3041	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4047	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R3044	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4048	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3046	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4051	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3047	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4104	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R3048	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4105	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R3049	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4201	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R3050	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4203	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R3051	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R4204	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3052	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R4205	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3053	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R4207	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3054	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R4208	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R3055	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4209	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R3060	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4210	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R3061	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4211	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R3062	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4301	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	20EF,30EF
R3063	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4302	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	20EF,30EF
R3066	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R4304	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	20EF,30EF
R3069	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R4305	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	20EF,30EF
R3071	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4306	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	20EF,30EF
R3072	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4307	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	20EF,30EF
R3073	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4308	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	20EF,30EF
R3075	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4309	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	20EF,30EF
R3076	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4310	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	20EF,30EF
R3079	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4311	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	20EF,30EF
R3088	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4312	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	20EF,30EF
R3089	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4317	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	20EF,30EF
R3090	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4318	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	20EF,30EF
R3094	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4319	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	20EF,30EF
R3095	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R4320	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	20EF,30EF
R3096	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6020	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W J	
R3097	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R6021	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W J	
R3123	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J		R6030	NRSA02J-332X	MG RESISTOR	3.3kΩ 1/10W J	
R3214	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J		R6031	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J	
R3218	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R6032	NRSA02J-183X	MG RESISTOR	18kΩ 1/10W J	20EF,30EF
R3219	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R6033	NRSA02J-183X	MG RESISTOR	18kΩ 1/10W J	20EF,30EF
R3220	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R6080	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J	
R3223	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R6707	NRSA02J-330X	MG RESISTOR	33Ω 1/10W J	
R3224	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R6708	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J	
R3225	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R6709	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W J	
R3226	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R6710	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R3229	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R6711	NRSA02J-104X	MG RESISTOR	100kΩ 1/10W J	
R3230	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R6712	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W J	
R3231	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R6713	NRSA02J-123X	MG RESISTOR	12kΩ 1/10W J	
R3233	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6714	NRSA02J-102X	MG RESISTOR	1kΩ 1/10W J	
R3234	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6715	NRSA02J-123X	MG RESISTOR	12kΩ 1/10W J	
R3235	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6716	NRSA02J-470X	MG RESISTOR	47Ω 1/10W J	
R3236	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6719	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
R3237	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6720	NRSA02J-562X	MG RESISTOR	5.6kΩ 1/10W J	
R3239	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6721	NRSA02J-562X	MG RESISTOR	5.6kΩ 1/10W J	
R3240	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7202	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R3242	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R7203	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R3248	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7204	QRE121J-100Y	C RESISTOR	10Ω 1/2W J	
R3249	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7301	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R3251	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7302	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R3252	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7303	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R3256	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7304	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R3257	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7305	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R3258	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7309	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R3260	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7311	QRE141J-153Y	C RESISTOR	15kΩ 1/4W J	
R4001	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7312	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4003	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7314	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R4004	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7315	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R4006	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7318	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R4007	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7319	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R4009	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7320	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R4010	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7335	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R4011	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7336	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R4012	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R7337	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R7338	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R8241	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7339	QRE141J-101Y	C RESISTOR	100Ω 1/4W J		R8242	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7340	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8244	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7341	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R8249	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7342	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R8250	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7343	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8252	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7344	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D		R8301	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R7345	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D		R8302	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R7346	NRSA63D-680X	MG RESISTOR	68Ω 1/16W D		R8303	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7347	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D		R8304	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7349	QRE121J-331Y	C RESISTOR	330Ω 1/2W J		R8305	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7350	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R8306	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7351	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R8307	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7352	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R8308	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7353	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R8309	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7354	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R8310	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7355	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R8311	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7356	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R8312	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R7357	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8313	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R7358	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8314	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R7359	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8315	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R7360	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8316	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R7361	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R8321	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R7367	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		R8322	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R7368	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R8323	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7378	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J		R8324	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R8001	NRSA63J-513X	MG RESISTOR	51kΩ 1/16W J		R8325	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R8002	NRSA63J-513X	MG RESISTOR	51kΩ 1/16W J		R8326	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R8007	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8501	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R8008	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8502	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R8013	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8503	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R8014	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8504	NRSA63J-820X	MG RESISTOR	82Ω 1/16W J	
R8015	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8505	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R8016	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8506	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R8017	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J		R8507	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R8019	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L3001	QQL231J-R22Y	COIL	0.22uH J	
R8020	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L4001	QQL29B1-100Z	P COIL	10uH J	
R8021	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L4002	QQL29B1-100Z	P COIL	10uH J	
R8022	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L4006	QQL29B1-100Z	P COIL	10uH J	
R8023	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L4007	QQL071J-8R2Y	COIL	8.2uH J	
R8024	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		L4201	QQL29B1J-100Z	P COIL	10uH J	
R8026	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J		L4301	QQL29B1J-100Z	P COIL	10uH J	20EF,30EF
R8031	NRSA63D-203X	MG RESISTOR	20kΩ 1/16W D		L6001	QQL29BK-1R0Z	P COIL	1uH K	
R8032	NRSA63D-203X	MG RESISTOR	20kΩ 1/16W D		L6002	QQL29BK-1R0Z	P COIL	1uH K	
R8033	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		L6005	QQL29BK-1R0Z	P COIL	1uH K	
R8034	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		L6701	QQL29B1J-3R3Z	P COIL	3.3uH J	
R8035	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		L7201	QQL29B1J-100Z	P COIL	10uH J	
R8036	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		L7304	QQL29B1J-100Z	P COIL	10uH J	
R8039	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		L7325	QQL071J-6R8Y	COIL	6.8uH J	
R8040	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		L8501	QQL071J-1R0Y	COIL	1uH J	
R8041	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J		B4001	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8042	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J		B4002	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8043	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J		B4102	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8044	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		B7301	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8045	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		B7304	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8046	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		B7305	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8047	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		B7306	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8201	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J		CN3001	QGF1207C1-18	CONNECTOR	FFC/FPC (1-18)	
R8202	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		CN3002	QGF1207C1-13	CONNECTOR	FFC/FPC (1-13)	
R8203	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		CN4001	QGF1207C1-11	CONNECTOR	FFC/FPC (1-11)	
R8204	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J		CN4101	QGB2027M5-28S	CONNECTOR	B-B (1-28)	
R8206	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		CN4102	QGB2027M5-20S	CONNECTOR	B-B (1-20)	
R8211	NRSA63D-432X	MG RESISTOR	4.3kΩ 1/16W D		CN5101	QGF1207C1-19	CONNECTOR	FFC/FPC (1-19)	
R8212	NRSA63D-432X	MG RESISTOR	4.3kΩ 1/16W D		CN7301	QGF1207C1-07	CONNECTOR	FFC/FPC (1-7)	
R8213	NRSA63D-512X	MG RESISTOR	5.1kΩ 1/16W D		GN1	QNZ0136-001Z	EARTH PLATE		
R8214	NRSA63D-512X	MG RESISTOR	5.1kΩ 1/16W D		GN2	QNZ0136-001Z	EARTH PLATE		
R8215	NRSA63D-121X	MG RESISTOR	120Ω 1/16W D		GN5	QNZ0136-001Z	EARTH PLATE		
R8216	NRSA63D-121X	MG RESISTOR	120Ω 1/16W D		GN6	QNZ0136-001Z	EARTH PLATE		
R8217	NRSA63D-432X	MG RESISTOR	4.3kΩ 1/16W D		J4109	QNS0089-001	3.5 JACK	COMPU LINK/SAT	
R8218	NRSA63D-432X	MG RESISTOR	4.3kΩ 1/16W D		J7301	QNZ0516-001	RGB CONNECTOR L-1		
R8219	NRSA63D-512X	MG RESISTOR	5.1kΩ 1/16W D		J7302	QNZ0516-001	RGB CONNECTOR L-2		
R8220	NRSA63D-512X	MG RESISTOR	5.1kΩ 1/16W D		J7309	QNN0635-002	PIN JACK	COMPONENT	
R8221	NRSA63D-121X	MG RESISTOR	120Ω 1/16W D		J8501	GP1FP513TKBF	OPT TRANSMITTER	OPTICAL/COAXIAL	
R8222	NRSA63D-121X	MG RESISTOR	120Ω 1/16W D		K6701	NQR0200-003X	FERRITE BEADS		
R8223	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		K6702	NQR0200-003X	FERRITE BEADS		
R8224	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		K6703	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	

△Symbol No.	Part No.	Part Name	Description	Local
K6704	NRSA02J-0R0X	MG RESISTOR	0Ω 1/16W J	
K6705	NQR0200-003X	FERRITE BEADS		
K6706	NQR0200-003X	FERRITE BEADS		
K6707	NQR0129-003X	FERRITE BESDA		20EF,30EF
K6708	NQR0200-003X	FERRITE BEADS		
K8001	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
K8002	NQR0339-001X	FERRITE BEADS		
K8201	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
K8401	NQR0339-001X	FERRITE BEADS		
K8501	NQR0227-004X	FERRITE BEADS		
TU6001	QAU0299-001	TUNER		20EF,30EF
TU6001	QAU0323-001	TUNER		20E,20E,30E,30E,30ER
W1	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W2	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W3	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W4	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W5	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W6	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W7	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W8	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W9	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W10	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W11	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W12	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W13	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W14	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W15	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W16	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W17	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W18	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W19	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W20	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W21	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W22	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W23	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W24	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W25	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W26	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W27	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W28	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W29	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W30	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W31	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W32	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W33	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W34	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W35	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W36	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W37	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W38	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W39	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W40	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W41	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W42	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W43	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W44	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W45	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W46	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W47	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W48	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W49	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W50	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W51	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W52	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W53	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W54	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W55	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W56	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W57	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
X3001	QAX0444-001	CRYSTAL	32.768kHz	20EF,20E,30E,30ER
X3001	QAX0445-001	CRYSTAL	32.768kHz	20E,30E,30ER
X3002	QAX0527-001	CRYSTAL	10.000000MHz	
X4001	QAX0576-001	CRYSTAL	4.433619MHz	
X6701	QAX0773-001Z	CRYSTAL	18.432000MHz	
OT1	PEME0946-04	SPACER	(x3)	

Operation board

Block No. [2][7]

△Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10239-04F3	OPERATION BOARD ASSY		20EF,30EF
PW1	LPA10239-05E3	OPERATION BOARD ASSY		20E,30E
PW1	LPA10239-06E3	OPERATION BOARD ASSY		20E,30E,30ER
Q7103	DTA114ESA-T	DIGI TRANSISTOR		
Q7104	DTA114ESA-T	DIGI TRANSISTOR		
Q7105	DTA114ESA-T	DIGI TRANSISTOR		
Q7106	DTA114ESA-T	DIGI TRANSISTOR		
Q7107	DTA114ESA-T	DIGI TRANSISTOR		
D7112	ISS133-T2	DIODE		
D7112	or ISS270A-T2	SI DIODE		
D7113	ISS133-T2	DIODE		
D7113	or ISS270A-T2	SI DIODE		
D7114	ISS133-T2	DIODE		
D7114	or ISS270A-T2	SI DIODE		
D7115	ISS133-T2	DIODE		
D7115	or ISS270A-T2	SI DIODE		
D7123	SLR-343MC-T	LED	VIDEO	
D7124	SDPC3DC0	LED	DVD	
D7125	SLI-343URC3F	LED	DVD REC	
D7126	SDPB3DC0	LED	HDD	
D7127	SLI-343URC3F	LED	HDD REC	
C7150	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C7151	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C7153	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R7106	QRE141J-181Y	C RESISTOR	180Ω 1/4W J	
R7108	QRE141J-681Y	C RESISTOR	680Ω 1/4W J	
R7110	QRE141J-331Y	C RESISTOR	330Ω 1/4W J	
R7112	QRE141J-471Y	C RESISTOR	470Ω 1/4W J	
R7114	QRE141J-331Y	C RESISTOR	330Ω 1/4W J	
R7151	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R7152	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R7153	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R7154	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7155	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7156	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
CN7101	QGF1208F1-13	CONNECTOR	FFC/FPC (1-13)	
CN7102	QGF1208F1-11	CONNECTOR	FFC/FPC (1-11)	
J7001	QND0084-001	S JACK	FRONT S-VHS	
J7002	QNN0364-002	PIN JACK	FRONT A/V	
S7113	QSW0381-001Z	TACT SWITCH	DVD	
S7114	QSW0381-001Z	TACT SWITCH	HDD	
S7115	QSW0381-001Z	TACT SWITCH	REC	
S7132	QSW0381-001Z	TACT SWITCH	OPEN/CLOSE	
S7133	QSW0381-001Z	TACT SWITCH	STOP	
S7134	QSW0381-001Z	TACT SWITCH	PLAY	
S7135	QSW0381-001Z	TACT SWITCH	PAUSE	
W7151	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W7152	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W7153	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
W7154	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	

Switch display board

Block No. [2][8]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10239-04F2	SWITCH DISPLAY BOARD ASSY	20EF,30EF	
PW1	LPA10239-05E2	SWITCH DISPLAY BOARD ASSY	20EK,30EK	
PW1	LPA10239-06E2	SWITCH DISPLAY BOARD ASSY	20E,30E,30ER	
IC7001	UPD16315GB-3BS	IC		
IC7001 or PT6315		IC		
IC7002	GP1UM281XK	IR DETECT UNIT 38KHz		
IC7002 or PNA4652M00XB		IR DETECT UNIT 38KHz		
Q7001	2SC1740S/QRS-T	TRANSISTOR		
Q7001 or 2SC3199/YG-T		TRANSISTOR		
Q7001 or KTC3199/YG-T		TRANSISTOR		
D7001	1SS133-T2	DIODE		
D7001 or 1SS270A-T2		SI DIODE		
D7021	RD9.1ES/B2/T2	Z DIODE		
D7021 or MTZ9.1B-T2		Z DIODE		
D7042	1SS133-T2	DIODE		
D7042 or 1SS270A-T2		SI DIODE		
D7043	SDPB3DC0/Z1/	LED	ILLUMI.	
C7001	QCFB1HZ-104Y	C CAPACITOR	0.1uF 50V Z	
C7002	QCFB1HZ-104Y	C CAPACITOR	0.1uF 50V Z	
C7003	QEJK1HM-106Z	E CAPACITOR	10uF 50V M	
C7006	QEJK0JM-476Z	E CAPACITOR	47uF 6.3V M	
C7007	QCFB1HZ-104Y	C CAPACITOR	0.1uF 50V Z	
C7008	QEJK0JM-227Z	E CAPACITOR	220uF 6.3V M	
C7010	QCFB1HZ-473Y	C CAPACITOR	0.047uF 50V Z	
C7011	QCFB1HZ-473Y	C CAPACITOR	0.047uF 50V Z	
C7056	QEJK1EM-106Z	E CAPACITOR	10uF 25V M	
R7001	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7002	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7003	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R7005	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R7006	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R7007	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7009	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
R7010	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7013	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R7014	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R7015	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7044	QRE141J-182Y	C RESISTOR	1.8kΩ 1/4W J	
R7045	QRE141J-470Y	C RESISTOR	47Ω 1/4W J	
R7047	QRE141J-182Y	C RESISTOR	1.8kΩ 1/4W J	
CN7001	QGF1207C1-18	CONNECTOR	FFC/FPC (1-18)	
DI7001	QLF0121-001	FL TUBE		
HD1	PQ34949-1-1	FL HOLDER(L)		
HD2	LP21255-001A	FL HOLDER(R)		
S7001	QSW0381-001Z	TACT SWITCH	STANDBY/ON	

S/RCA Out board

Block No. [2][9]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10239-04F5	S/RCA OUT BOARD ASSY	20EF,30EF	
PW1	LPA10239-05E5	S/RCA OUT BOARD ASSY	20EK,30EK	
PW1	LPA10239-06E5	S/RCA OUT BOARD ASSY	20E,30E,30ER	
C7326	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7365	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C7367	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R7327	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R7328	NRSA63D-750X	MG RESISTOR	75Ω 1/16W D	
R7365	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7366	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
CN7312	QGF1208F1-07	CONNECTOR	FFC/FPC (1-7)	
J7307	QNN0631-001	PIN JACK	REAR AUDIO OUT	
J7308	QND0009-001	S JACK	REAR S-VIDEO OUT	

Jack board

Block No. [3][6]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	LPA10239-04F4	JACK BOARD ASSY	20EF,30EF	
PW1	LPA10239-05E4	JACK BOARD ASSY	20EK,30EK	
PW1	LPA10239-06E4	JACK BOARD ASSY	20E,30E,30ER	
CN4104	QGB2027M1-10S	CONNECTOR	B-B (1-10)	
J4112	QNZ0575-001	D CONNECTOR	FRONT DV	
OT1	QZW0021-001	PC SUPPORT		

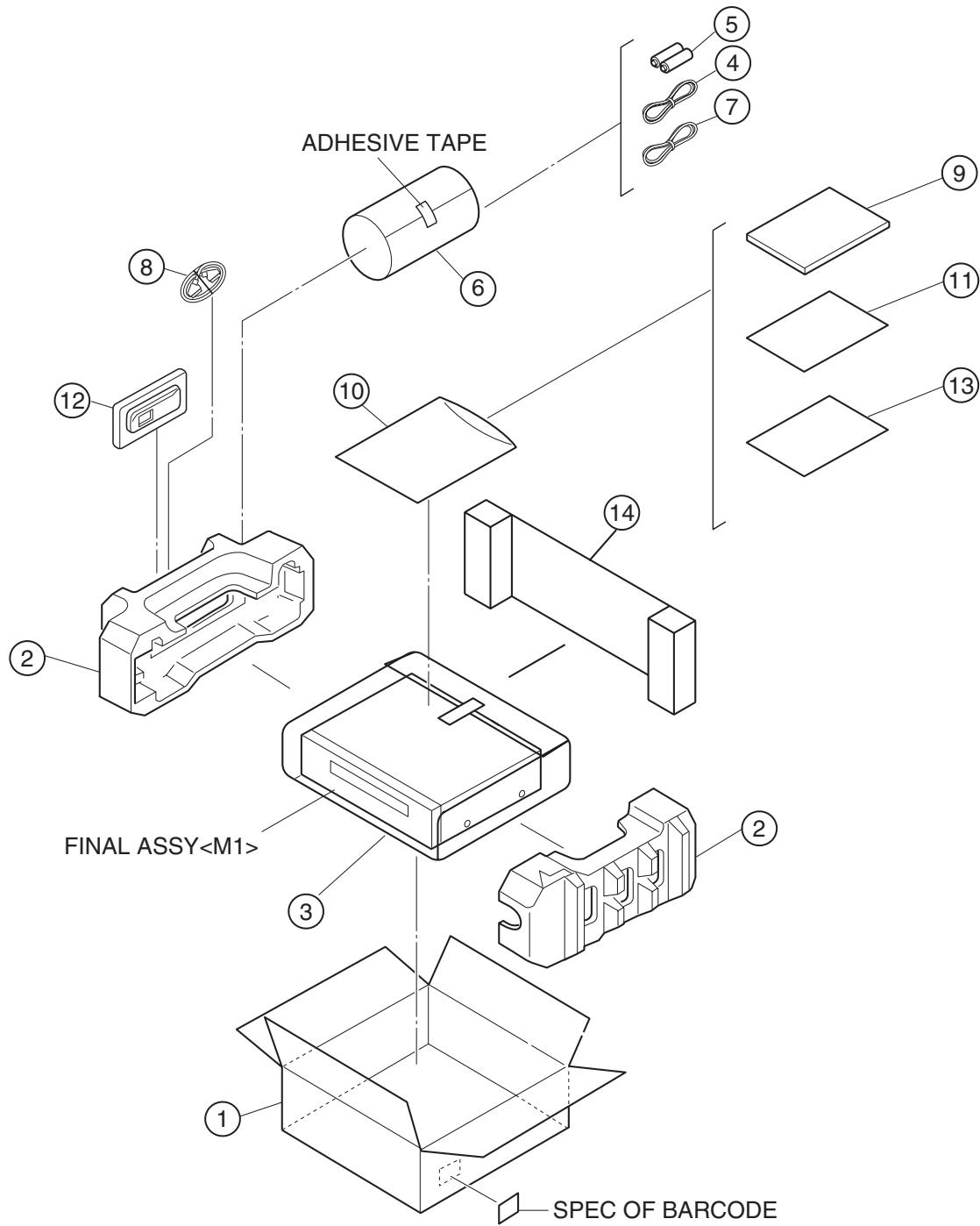
MAIN SUB board

Block No. [9][9]

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	YB20835G-CS	MAIN SUB CM ASSY		
K0110	NQR0129-002X	FERRITE BEADS		
K0120	NQR0129-002X	FERRITE BEADS		
K0130	NQR0129-002X	FERRITE BEADS		

Packing materials and accessories parts list

Block No.M2MM



Packing and accessories

Block No. [M][2][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
1	LP31384-013A	PACKING CASE		20E
1	LP31384-014A	PACKING CASE		20EF
1	LP31384-015A	PACKING CASE		20EK
1	LP31384-008A	PACKING CASE		30E
1	LP31384-009A	PACKING CASE		30EF
1	LP31384-010A	PACKING CASE		30EK
1	LP31384-026A	PACKING CASE		30ER
2	LP31387-002A	CUSHION ASSY		
3	PQM30021-93	POLY BAG		
4	QAM0525-002	RF CABLE		
5	-----	BATTERY	R6 TYPE(x2)	
6	QPC02202230P	POLY BAG	22cm x 22cm	
7	QAL0517-005	LED CABLE ASSY		
8	QAM0502-002	PERI CABLE		
△ 9	LPT0923-001A	INST.BOOK	(ENGLISH)	20E,30E
△ 9	LPT0923-002A	INST.BOOK	(GERMANY)	20E,30E
△ 9	LPT0923-003A	INST.BOOK	(FRENCH)	20E,30E
△ 9	LPT0923-004A	INST.BOOK	(DUTCH)	20E,30E
△ 9	LPT0923-005A	INST.BOOK	(SPANISH)	20E,30E
△ 9	LPT0923-006A	INST.BOOK	(ITALIAN)	20E,30E
△ 9	LPT0923-007A	INST.BOOK	(DANISH)	20E,30E
△ 9	LPT0923-008A	INST.BOOK	(SWEDISH)	20E,30E
△ 9	LPT0923-009A	INST.BOOK	(FINNISH)	20E,30E
△ 9	LPT0923-010A	INST.BOOK	(NORWEGIAN)	20E,30E
△ 9	LPT0923-011A	INST.BOOK	(PORTUGUESE)	20E,30E
△ 9	LPT0923-012A	INST.BOOK	(CZECH)	20E,30E
△ 9	LPT0923-013A	INST.BOOK	(POLISH)	20E,30E
△ 9	LPT0923-014A	INST.BOOK	(HUNGARIAN)	20E,30E
△ 9	LPT0924-001A	INST.BOOK	(FRENCH)	20EF,30EF
△ 9	LPT0925-001A	INST.BOOK	(ENGLISH)	20EK,30EK
△ 9	LPT0955-001A	INST. BOOK	(RUSSIAN)	30ER
10	QPC02503530P	POLY BAG	25cm x 35cm	
11	BT-54023-1	WARRANTY CARD		
12	RM-SDR011E	REMOCON		
13	VNA3000-204	REGISTER CARD		20EK,30EK
14	LP31399-001A	SHEET ASSY		20EK,30EK